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MINISTRY OF TREASURY ECONOMICS AND INTERGOVERNMENTAL AFFAIRS

ECONOMIC DEVELOPMENT IN ATIKOKAN

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ECONOMIC DEVELOPMENT IN ATIKOKAN

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Prepared For The

Government of Ontario

Ministry of Treasury Economics
and Intergovernmental Affairs

By

Kates, Peat, Marwick & Co.

November 1973

KATES
PEAT
MARWICK&CO.

Management Consultants

Commerce Court West
P.O. Box 31, Commerce Court
Postal Station, Toronto, Ontario
Phone (416) 863-3500

PRIVATE

December 7, 1973

Mr. A. B. Morpurgo
Manager
Northern Ontario Section
Regional Planning Branch
Ministry of Treasury, Economics
and Inter-Governmental Affairs
North Frost Building
Queen's Park
Toronto, Ontario
M7A 1Z3

Dear Mr. Morpurgo:

A Study of the Development
Potential of Atikokan

We are pleased to submit our final report on the economic development potential of the Atikokan area.

In this letter, we present the background of the study, objectives, approach, summary of findings and recommendations.

BACKGROUND

We were requested to undertake a study to assess the economic development potential of the Town of Atikokan. During the eight weeks of the study we have analyzed the impact of the closure of the Caland ore facility and assessed the potential of the various economic sectors to provide income and employment opportunities.

In addition, we have made certain recommendations which we believe will accelerate the economic development of Atikokan and mitigate the impact of the closure of the Caland operation. We have also examined the economic and social impact of the proposed Atikokan - Ignace Highway.

STUDY OBJECTIVES

As defined in the terms of reference, the objectives of the study were:

1. To measure the economic potential of the mining, forestry, manufacturing and recreation sectors of Atikokan and the surrounding area.
2. Review existing government and private documents to assess the economic and social impact of the proposed Atikokan to Ignace Highway.
3. Develop a series of development options for Atikokan.
4. Recommend a development strategy for the Atikokan area.

APPROACH

Our approach to this engagement is divided into the following phases:

- literature search
- data collection and analysis
- field surveys
- interviews
- summary of findings
- recommendations.

Literature Search and Data Collection and Analysis

We conducted a thorough literature search of relevant studies and reports prepared by the Provincial Government, Federal Government, private sources, United States Government, State of Minnesota and the Kates, Peat, Marwick & Co. Library.

Data was collected from the Ministry of Treasury, Economics and Intergovernmental Affairs, the Ministry of Natural Resources, the Ministry of Industry and Tourism, The Ministry of Transportation and Communications, Statistics Canada, the Department of Industry, Trade and Commerce and the Department of Energy, Mines and Resources. Statistics were also provided by the Caland Ore Company Ltd. and the Steep Rock Iron Mines Company Ltd. This data was analyzed to assess the impact of the Caland closure and to quantitatively identify areas of economic development potential.

Field Surveys and Interviews

During the course of this study, we made two field trips to Atikokan and Thunder Bay. We also visited Fort Francis and Ely, Minnesota.

We conducted over 60 telephone and personal interviews with residents of Atikokan, Provincial Government officials, companies located in Atikokan and/or Northwestern Ontario, Federal Government Officials, and other knowledgeable individuals and organizations.

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Mr. A. B. Morpurgo December 7, 1973

SUMMARY OF FINDINGS AND RECOMMENDATIONS

The summary of findings and recommendations of the study are presented as follows.

Impact of the Caland Closure

- Closure of the Caland facility will result in the loss of approximately 400 mining jobs between 1976 and 1978.
- As of November 1, 1973 approximately 46 per cent of the Caland work force is 30 years of age or younger.
- The loss of the 400 jobs at Caland will have a significant income impact upon Atikokan. That is, the younger workers who had purchased goods and services in the community will no longer be resident in the Town. However, the severity of the loss of 400 jobs will, in part, be mitigated by the fact that many of these 400 workers are 30 years of age or younger and do not own homes in the community and do not have families. If no other basic jobs are created to replace the 400 mining jobs, their loss would probably result in the loss of an additional 120 jobs in the retail and services sectors; both rate of job losses would affect the support of about 1900 persons now living in Atikokan.

Union expect 60 unemployed in 1976 (page I-24)

- Provided that the Steep Rock facility remains open until 1985, Atikokan should be capable of absorbing impact of the closure of the Caland facility.
- Assuming the recommendations in this report are implemented, the opportunities, to create additional income and employment to offset the closure of the Caland facility appear to be reasonably good.

Tourism

- The existing level of tourism in the Atikokan district contributes little to the economic base of the town. The principal reasons for this can be summarized as follows:
  - Atikokan offers few amenities, such as good restaurants, accommodation facilities, and gift shops, to attract significant tourist expenditures.
  - the overall aesthetic appeal of the town does not create a favourable first impression.

  - at this time, there is no sustained promotional campaign, designed to maximize the tourist potential of the area.
  - the majority of tourists enter the Quetico Park area from southern access points in the United States. This tends to minimize the impact of the Quetico Park area upon the tourist development of Atikokan.

- The town of Ely, Minnesota was studied in order to assess its potential as a tourist model for the development of Atikokan. The situation in Ely is as follows:
  - at this time the majority of the Ely work force is employed in the mining industry.
  - although tourism has contributed significantly to the level of income in Ely, it has not been a significant creator of employment.
  - at this time there are no luxury resorts in the Town of Ely.

- The tourist development potential of Atikokan appears to be good and while the development of this industry will primarily create income, there will also be a certain level of job creation. This income could, to a large degree, offset the loss of income associated with the closure of the Caland facility.

|| will need a lot of tourists --

Mining

- Although Atikokan is considered an area of high mineral potential, there are no known major investments planned in the mining sector. However, there is a possibility that certain now-defunct gold mines may be reactivated.
- A significant level of exploration activity has been conducted in the Atikokan area over the past twenty years.
- We have examined the hub city concept with respect to Atikokan, and it appears that Atikokan may act as a hub city for developments within a 50 mile radius.

- It is hazardous to attach a probability to the likelihood of a new mine being established in the area in the next few years since the results of exploration activities are difficult to predict.

Forestry

- At this time, there are no known plans for major investments in the forestry sector in the Atikokan area. There are major expansion plans in the general North Western Ontario area and, if Atikokan workers are willing to commute, there may be employment generated within a reasonable commuting radius of the Town of Atikokan.

- Two major U.S. companies have exhibited an interest in the wood resource potential of the Atikokan area, and discussions are currently underway with officials of the Ministry of Natural Resources.

- The coniferous species in the area appear to be harvested fully to allowable cut levels. Poplar stands, however, are under-utilized.

- The Ministry of Natural Resources estimates that 100,000 cords per year of poplar are available from the Atikokan district, of which only 15 per cent is suitable for sawlogs or veneers. This estimate needs to be substantiated by a detailed inventory.

- There are a number of potential uses for the poplar resource including particleboard, waferboard, pallets, snow fences and pulp.

- The prospects for the establishment of a forestry based industry in the Atikokan area appear to be good. This potential is enhanced given the buoyant nature of international markets at this time.

Manufacturing

- There are no known major investments planned in the manufacturing sector.

- Currently, the potential for growth in secondary manufacturing appears to be reasonable, mainly in the incremental growth of existing industries, and the development of new industries, by local entrepreneurs. However, the size of these establishments may not be sufficient to generate significant amounts of employment.

- The employment generating potential of secondary manufacturing could be enhanced by the establishment of an Atikokan Development Corporation.

Transportation

- Studies have indicated that airports in communities such as Atikokan assist in the industrial development process. (Recent announcements indicate that the Ministry of Transport may respond favourably to a request that airport facilities be developed at Atikokan).

- Atikokan has two private airstrips, and it may be possible to upgrade one of these, if a decision is made to establish a commercial airport in the area.

- The economic impact of such an airport would be increased given the implementation of the development recommendations and the resultant expansion of the economic base in the area.

- The Ministry of Transportation and Communications analysis, with respect to the proposed road from Atikokan to Ignace, is, in our view, methodologically correct. However, the analysis does not estimate the impact on the tourist industry of the proposed road.

MTC considers little new tourist traffic

- The maximum impact of the road on tourism will not occur until a number of recommendations have been implemented with respect to upgrading facilities in the Town and providing the necessary tourist amenities in Atikokan.

- The social benefits of the proposed road, although difficult to quantify, should form an important part of any cost/benefit analysis, given the locational characteristics of the town in Northwestern Ontario.

- The provision of a road for the residents of both communities based upon social considerations becomes, essentially, a political decision. If a road is built for social/political reasons, care should be taken to ensure that proper control is maintained over the area that now becomes accessible. If such control is not maintained the likelihood of indiscriminant use of an area of natural wilderness beauty will be increased and the potential impact on existing tourist facilities may be negative.

- The construction of a road link between Atikokan and Ignace will be a logical component of an economic development program for the area. Its timing should be such that maximum economic,as well as social, benefits result from its construction, for residents of the area. Our findings indicate that, for this reason, a number of less capital-intensive actions should be taken first, and this is reflected in the priorities shown in the following section.

RECOMMENDATIONS

The following recommendations briefly outline some of the major steps that government may take in order to accelerate the economic development of Atikokan. We believe that the implementation of these recommendations as a unified package will have a synergistic impact which will exceed the sum of implementing each of the recommendations individually. In addition, the timing and phasing of the implementation of these recommendations are important. For example, it is possible to immediately begin work on an airport for Atikokan and the development of such a facility would certainly have a favourable impact upon the secondary manufacturing and tourist industries. However, the establishment of the Atikokan Development Corporation, and given positive results from the Development Corporation's activities, would result in a higher justification for such an airport facility than that shown by an immediate analysis. Also, the impact of the airport would be greater given the fact that economic development was beginning to occur and the building of the airport would add synergistically to that economic development.

The following recommendations are listed on a priority scale, from one to four. Those recommendations which receive a value of one should be implemented first, as these will maximize the impact of the subsequent recommendations.

(1) Establishment of an Atikokan Development Corporation

- The Corporation would be responsible for the development of the industrial and tourist sectors in Atikokan. It would also explore other types of opportunities, for example, the establishment of a federal penitentiary in the area which, on average, could create 150 permanent jobs.
- The funding for the Corporation would, preferably, come from local, provincial and (if possible) federal sources. The local participation aspect is important as it would allow local members to be on the Board of Directors of the Corporation.
- The role of the Atikokan Development Corporation would be to act as an initiator for economic development. It would:
    - provide incentives to attract footloose secondary manufacturing industries
    - assist the tourism sector in conducting promotional campaigns and in obtaining adequate financing
    - become involved in the general development of the Town, such as the redevelopment campaign in order to make Atikokan more visually attractive
    - assist local entrepreneurs through such assistance as providing required funding, obtaining management assistance through such programs as the use of retired executives, and by retaining management consultants

- If required because of the closure of the Steep Rock facility, the Corporation could become involved in the retraining and mobility of redundant workers. (The involvement of local citizens on the Board of Directors would be an important consideration for having the Development Corporation coordinate these mobility and retraining programs).

No. ?

(1) Implement the Report of the Quetico Provincial Park Advisory Committee

- The proposed quota system should be implemented as soon as is practicable, such that more visitors to the Park would be encouraged to enter through northern access points. The attendant increased volume of traffic in the Atikokan area would result in the requirement for more northern access points; preferably one of more of these access areas should be located as close as possible to Atikokan.

(1) Improve and Develop the Amenities in Atikokan Required to Attract Tourists

- A redevelopment of the downtown area should be initiated, in order to make it more visually appealing and to create the types of establishments which attract tourists.
- Visual improvement of the industries presently located along Highway 11B.
- Creation of visual amenities near the junction of Highway 11 and 11B would encourage visitors to stop at that location, and then to proceed on to Atikokan.
- More and better facilities should be established to attract tourist expenditures. If local entrepreneurs are not prepared to develop such a facility then the Atikokan Development Corporation may be required to construct such a facility itself in order to initiate the total development of the tourist sector in the area. The Corporation should be prepared to undertake the construction of such a facility even though the economic viability of the project may be questionable in the short run.

(1) Conduct Feasibility Studies for a Recreational Complex

- A preliminary report prepared for the Ontario TORPS Committee identified the Quetico area as a potential location for an integrated recreational complex. The report concluded that detailed feasibility studies should be undertaken to assess the viability of such a project. This proposed project is consistent with the recommendations of our study to maximize the tourist/recreational potential of the Quetico amenity. We, therefore, recommend that these detailed feasibility studies be conducted as soon as possible.

I & T.

(1) Conduct an Inventory of Poplar Stands

- A detailed analysis of the quantity and quality of the wood available in the Atikokan area is required to substantiate initial estimates made by the Ministry of Natural Resources.
- This analysis should include those areas within economic hauling distance of Atikokan as well as the immediate area.

(1) The Province of Ontario Mineral Exploration Assistance Program

- The Town of Atikokan should be immediately designated under the mineral exploration assistance program. Although the designation should be made immediately, the uncertainty of discovering an economically valuable mineral deposit means that the potential impact of this recommendation cannot be quantified.

(2) Develop an Atikokan Airport

- Build a new airport or upgrade one of the existing airports:
  - the impact of such an airport will be enhanced if it is developed after the Atikokan Development Corporation has increased the general level of economic activity in the area. The cost of upgrading one of the two existing airports could be $200,000 plus. Construction of a new paved 3,000-4,000 ft. runway (150 feet wide) would cost from $250,000 to $1 million depending upon such factors as drainage and grading

requirements. Construction of a new paved runway the length of the Dryden Airport (5,400 by 150 feet) could cost up to $1.5 million.

(2) Prepare a Land Use Plan

- Preparation of a land use plan will determine, in detail, the potential utilization of specific areas to the north of Atikokan. The land use plan should be capable of modification as the Atikokan Development Corporation creates industrial and tourist activity in the area. For example, given the increase in a certain level of tourist activity it may be necessary to modify the plan in order to attract either more of these types of tourists and/or attract tourists who will use different forms of amenity in the area.

(2) Negotiate Shared Cost Programs with the Federal Government for the Atikokan Area

- The Province of Ontario should attempt to determine those shared cost programs which may have the greatest impact on the Atikokan area and then enter into discussions with the Federal Government in order to obtain a designation for Atikokan under the relevant programs. For example, the Department of Energy, Mines and Resources and the Department of Regional Economic Expansion have entered into joint cost shared programs with some of the provinces in order to conduct extensive mineral exploration activity in designated areas. It appears that this program has had some success in the Province of New Brunswick and we recommend that the area around Atikokan be designated under a program of this nature.

(2) Study of the Feasibility of Utilizing the Poplar Stands for Specific Forest Industry Investments

- Feasibility studies will determine those specific poplar-using industries that will maximize the effective and efficient use of the poplar resource.

- The Atikokan Development Corporation should formulate plans to develop a promotional campaign to attract viable business organizations that would be prepared to make effective use of the wood resource in the area.

(3) Road from Atikokan to Ignace

- The timing of construction of the road should be under continuing review and in the light of results of the above activities. As tourist attractions are created in the area, a land use plan is developed to cover the corridor through which the road would run, and, particularly, if mineral resources are found in the corridor it would be likely that the road would be economically and socially justified during the next ten years.

(4) Analyze other Areas of Development Potential

- The Atikokan Development Corporation should, in conjunction with provincial and federal departments and agencies, analyze all realistic possibilities for the creation of income and employment opportunities in the town of Atikokan. Contact should be initiated with such federal departments as the Department of Energy, Mining and Resources, the National Research Council and Department of Manpower and immigration. For example, there is the possibility that the present Steep Rock facility (which will no longer be used when Steep Rock takes over operation of the Caland Ore Company) could be used as an area to conduct underground mining research given the type of soil in the area. Also, discussions with the federal department indicate that there is some possibility that the Atikokan area might be designated as a training centre with specific reference to the mining industry.

The preparation of this study would not have been possible without the cooperation and assistance of the many governmental and private sources which provided data and their qualitative assessment of the area. Particularly, we would like to thank the members of the Steering Committee and principal community leaders in Atikokan for their assistance during the course of this research.

We have enjoyed working on this challenging assignment and trust that the findings and recommendations of this report will be useful to the Province of Ontario and people of Atikokan in acting to secure and enlarge the economic base of the area.

Yours truly

Kates, Peat Marwick & Co

ECONOMIC DEVELOPMENT IN ATIKOKAN

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EXHIBIT 2

POPULATION OF SELECTED CENTRES IN NORTHWEST ONTARIO (1971)

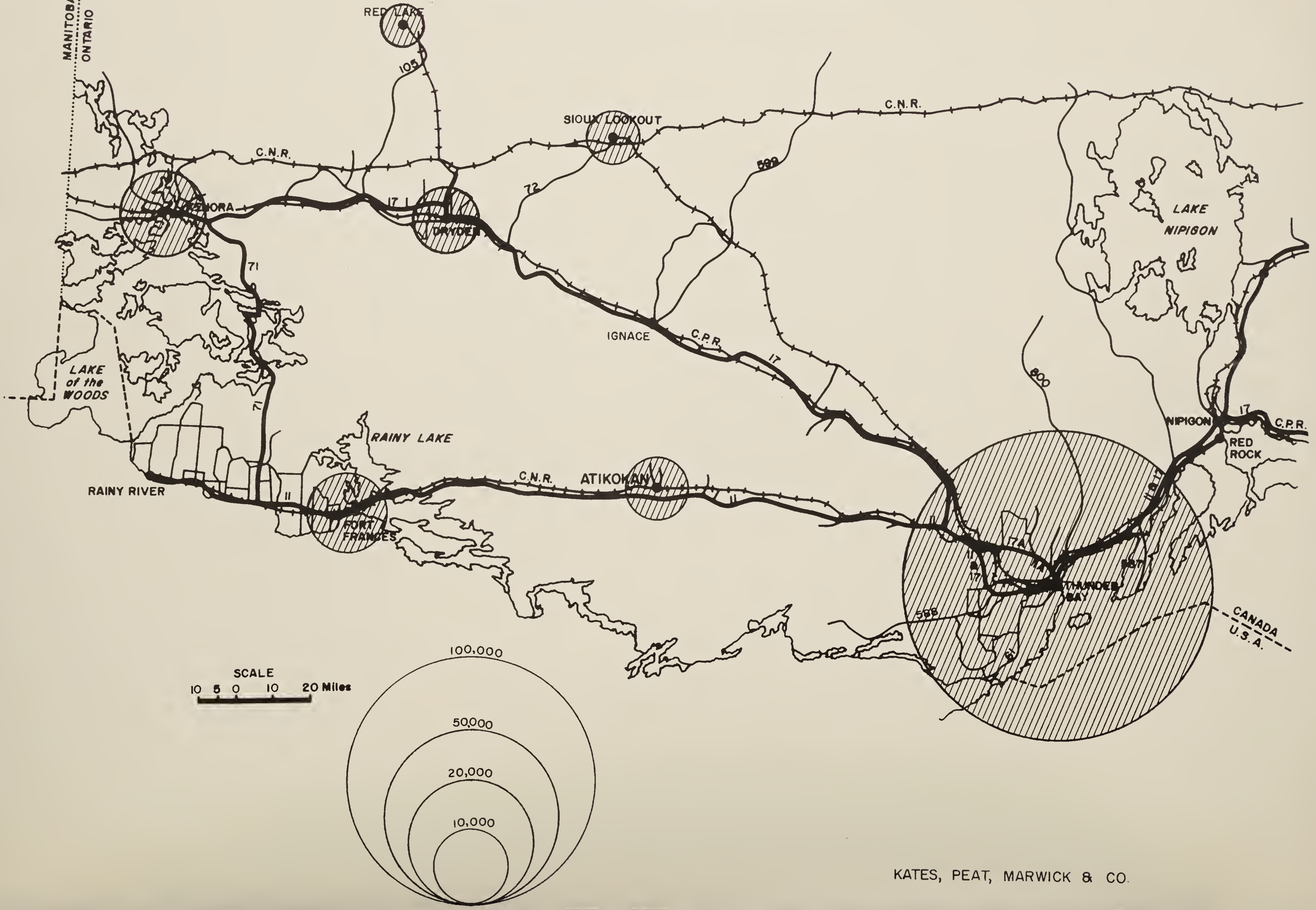

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EXHIBIT 1

POPULATION OF ATIKOKAN (1960-1972)

YEAR	POPULATION
1960	7,456
1961	6,918
1962	6,336
1963	5,829
1964	5,959
1965	6,310
1966	6,504
1967	6,586
1968	6,178
1969	6,211
1970	6,133
1971	6,090
1972	5,841
1973	5742
1974	5574

SOURCE: Industrial Surveys 1960 to 1972 - Ontario Ministry of Industry and Tourism

I - ECONOMIC BASE OF ATIKOKAN

DEMOGRAPHIC/INFRASTRUCTURE

Population

The population of Atikokan between the years 1960 to 1972 is shown in Exhibit 1, opposite. The significant decline between 1960 and 1963 is attributed to the termination of two large mine dredging contracts and the completion of the construction of the Caland Ore Co. mine which commenced production in 1960. More significant is the gradual population decline between 1967 and 1972 - an overall drop of 11.3 per cent. In 1971 male to female population ratio was 1.12:1 and number of households totalled approximately 2,300.

Exhibit 2, opposite, compares Atikokan's population with those of other urban centres in northwestern Ontario.

Age Structure

Population age structure for the years 1951 and 1971, shown in Exhibit 3, overleaf, illustrates that the composition of the town's population has changed. In 1971 48 per cent of the inhabitants were aged below 20 years, compared to 38 per cent in 1951; generally there were higher proportions of people in the young and old age groups and fewer in the 20-44 year age group in 1971, indicating a more balanced population group in terms of family formation.

EXHIBIT 3

POPULATION OF ATIKOKAN BY AGE GROUP

(1951 and 1971)

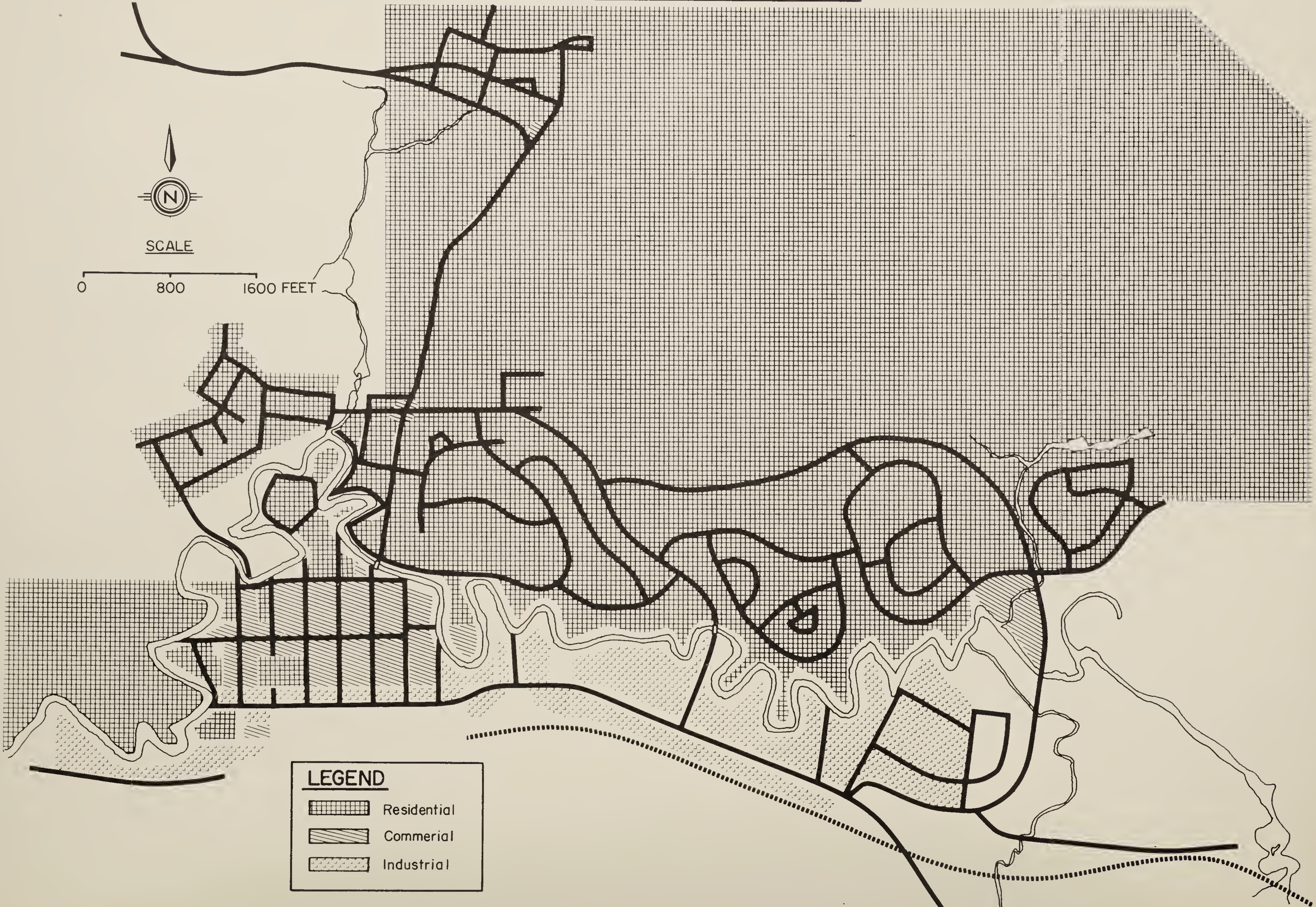
Age Group	1951		1971		
	Total[i]	Percentage	Male	Female	%
0 - 4	491	17.4	345	335	11.2
5 - 9	278	9.9	390	375	12.6
10 - 14	180	6.4	415	365	12.8
15 - 19	141	5.0	390	305	11.4
20 - 24	289	10.3	285	240	8.6
25 - 34	672	23.8	390	380	12.7
35 - 44	384	13.6	370	350	11.8
45 - 54	227	8.0	330	300	10.3
55 - 64	116	4.1	195	145	5.6
65 - 69	21	0.7	50	35	1.4
70+	22	0.8	50	50	1.6
TOTAL	2,821	100.0	3,210	2,880	100.0

(i) Breakdown by sex not available

SOURCE: Statistics Canada

EXHIBIT 4

ZONING MAP OF ATIKOKAN-1973



Source : The Township of Atikokan

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Housing

Prior to 1940, Atikokan was a C.N.R. divisional point with approximately 65 homes. From 1940 to 1950, with the expansion of the town following the establishment of Steep Rock's iron ore mining operation, a further 410 homes were built, many under the North American Wartime Housing Plan. These were designed with one door, no basement and were heated by oil-fired space heaters.

In 1950 to 1960 a land development project under the National Housing Act was introduced and building loans through the Central Mortgage and Housing Corporation were made available. In this decade, a further 830 homes were built. In the period 1961 to 1972, 35 homes were constructed and 70 structures moved into the town from outlying wood-camp operations, and converted into residential dwellings.

A 1973 inventory of the housing stock in Atikokan shows the following:

- private single-family dwellings	1,340
- company-owned dwellings	110
- apartments	80
- duplexes	13
- rented dwellings	85
- trailers	59
- dwellings in commercial places	74

A zoning map showing residential, commercial and industrial areas of Atikokan is contained in Exhibit 4, opposite.

In the past few years, there has been a shortage of housing in the town, with private homes being sold almost immediately as they become available. Despite this healthy demand situation, house prices have remained at a level far below the average for Ontario, with $15,000 being the average price for a three bedroom home. While this is attractive to a person moving to Atikokan, and those currently living there, it means that a person moving from the town to almost any other centre of population is faced with significantly higher housing costs than those to which he has become accustomed.

Education

Educational facilities in the town include:

- 5 elementary schools
- 1 separate school
- 1 secondary school.

Secondary school pupils totalled 632 in 1972/1973, representing a drop of 30 from the previous year when the school added a new wing. Currently, there are between 125 and 150 unfilled secondary school places available. The school offers a full secondary educational program, as well as a special "outers" program which concentrates on resource industries and technologies. Graduates from grades 12 and 13 from the school in 1973 totalled 110.

Fifteen miles to the east of Atikokan lies the Quetico Centre. This is a managerial, technical and vocational school that offers a broad range of educational programs, both to local residents and to participants from all of Ontario.

EXHIBIT 5

CULTURAL AND RECREATIONAL AMENITIES IN ATIKOKAN (1973)

LIBRARY:

- Civic Library and Museum.

CHURCHES:

- Anglican
- Baptist
- Calvary Lutheran
- Greek Orthodox
- Roman Catholic
- Greek Catholic
- Jehovah's Witnesses
- Pentecostal
- Presbyterian
- United
- Zion Lutheran

RECREATIONAL FACILITIES:

Existing

- outdoor swimming pool
- tour parks
- indoor arena
- four outdoor hockey rinks
- badminton and tennis courts
- putting course
- archery/gun range
- bowling alley
- two ski hills
- snowmobile club
- stock car track
- movie theatre
- four-sheet curling rink.

Under Construction

- indoor swimming pool
- nine-hole golf course
- tourist bureau.

Planned for 1974

- recreation complex at base of one ski hill
- country club to be developed on golf course.

SOURCES: Atikokan - Ignace Highway Report - Ontario Ministry of Transportation and Communications, and KPM&Co.

Health Facilities

Atikokan has a 26-bed hospital which had a 65 per cent occupancy rate in 1972. Services include:

- 24 hour ambulance service
- laboratory
- x-ray facilities
- operating facilities
- three doctors and one intern
- five dentists.

A new 25-bed hospital is planned for spring 1974 construction, at a cost of $1¼ million. On completion of this new facility, the existing hospital will be converted into either a nursing home or geriatric centre.

Cultural and Recreational Facilities

Exhibit 5, opposite, details existing and planned cultural an and recreational facilities.

Transportation and Communications Facilities

The main transportation and communication facilities of Atikokan are illustrated in Exhibit 6, overleaf.

The airstrip owned by the mining companies is located approximately two miles from the mines, and four miles to the northwest of Atikokan. The resort owners' airstrip is sited at Crystal Lake, 15 miles

EXHIBIT 6

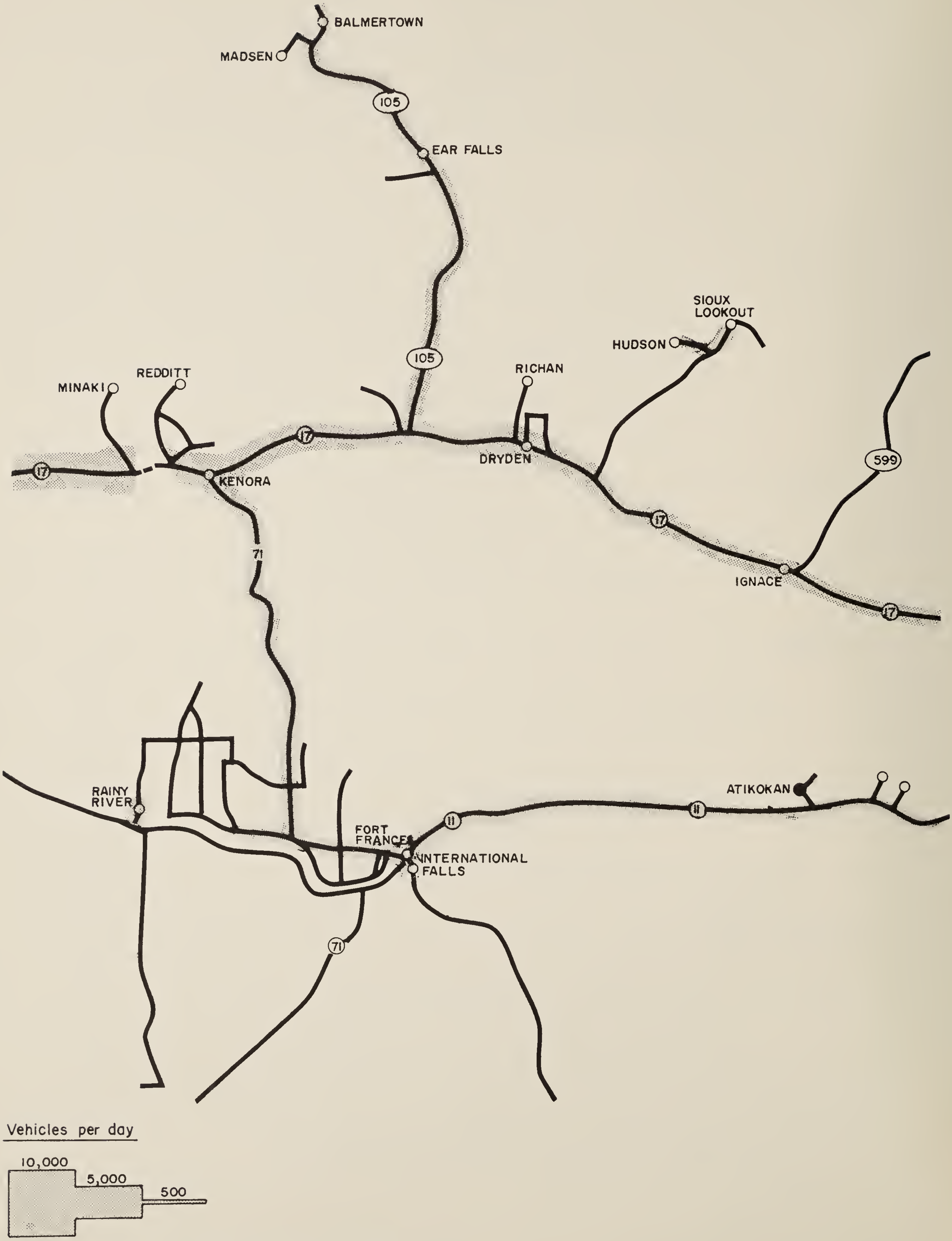
TRANSPORTATION AND COMMUNICATION FACILITIES IN ATIKOKAN (1973)

AIRPORT	- One private, unpaved 1,800 foot runway owned by Steep Rock Mines and Caland Ore Co. Ltd. - One private, unpaved 3,900 foot runway owned by local resort owners - Nearest commercial airport is in Thunder Bay, 130 miles to the east.
RAILWAY	- Canadian National division point.
ROADS	- Highway 11B connects Atikokan to Highway 11, two miles to the south.
TRUCKING	- Atikokan truck terminal and bonded warehouse - Three trucking operations
BUS LINES	- Grey Goose Bus Lines: - daily to Winnipeg - twice daily to Fort Francis - twice daily to Thunder Bay
COMMUNICATIONS	- Radio - C.B.C. booster - Television - C.B.C. microwave - cable system (five channels) - Newspaper - "Atikokan Progress" weekly

SOURCE: Atikokan - Ignace Highway Report - Ontario Ministry of Transportation and Communications

EXHIBIT 7

TRAFFIC FLOW IN 1968



Source: Area Transportation Planning Study
-Ministry of Transportation and
Communications, Nov. 1972

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to the east of Atikokan. Neither airstrip has night landing facilities or navigational equipment. In addition to these two airstrips, there are several seaplane bases that are operated by local resort owners.

Travel Patterns

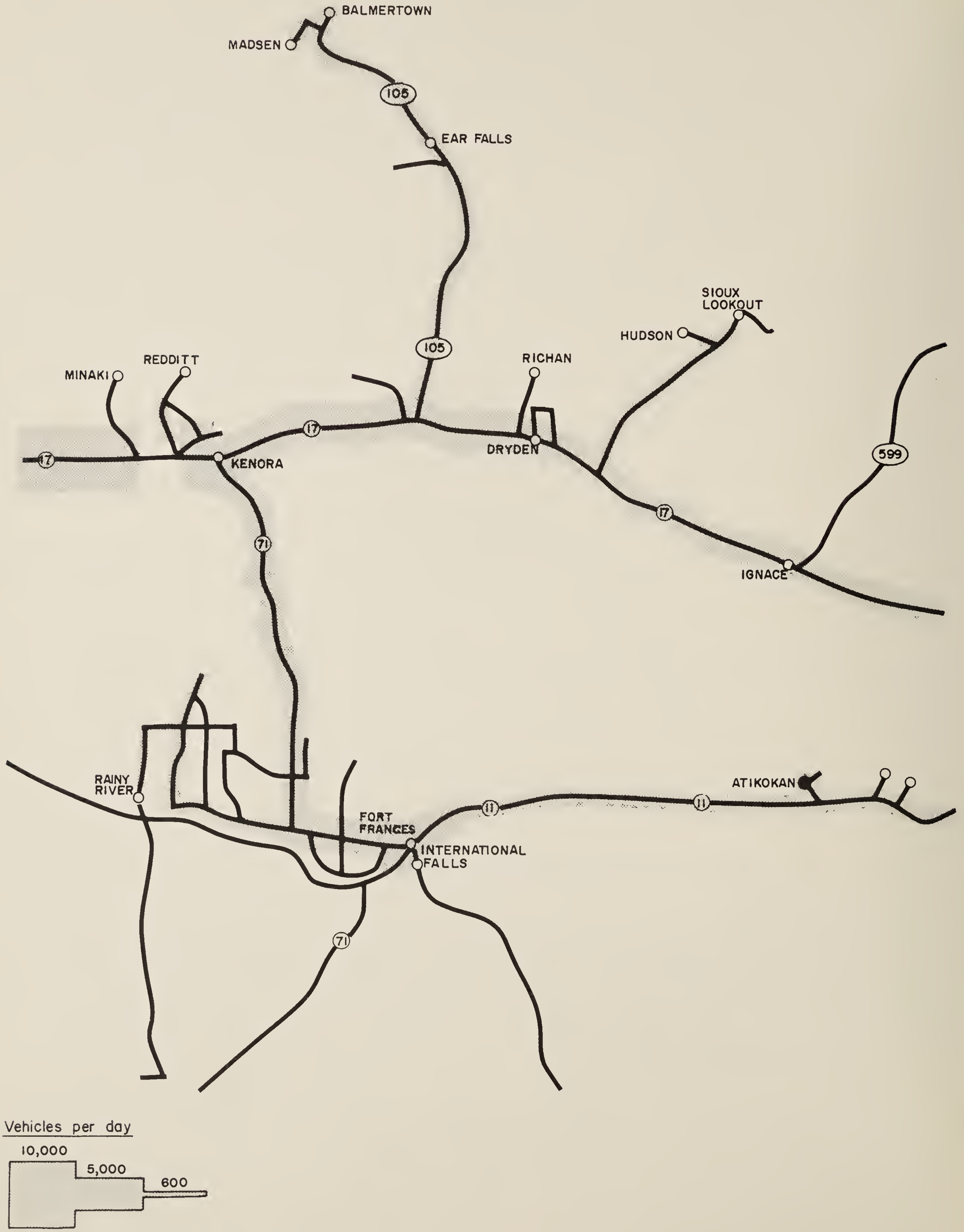
The following travel patterns in the Atikokan area were compiled by roadside interview surveys that identified origin and destination statistics and data on trip purpose. The surveys were conducted during the summer months so that data on recreational travel would be obtained together with routine year round trips.

The existing traffic flow on the Provincial highway network for an average summer weekday is shown in Exhibit 7, opposite. The main east-west corridor is served by highway 17, which carries between 2,000 and 4,000 vehicles per day. The larger volumes are served by the section between Kenora and the Manitoba border. Approximately 90 per cent of the traffic on highway 17 is comprised of trips over 50 miles in length, with the remainder being mainly travel between urban centres along the route.

Highway 11, the main link between Fort Frances and Thunder Bay, serves volumes in the range of 500 to 2,500 vehicles per day. It is interesting to note that traffic volumes along the stretch of highway adjacent to Atikokan lie towards the lower end of this range at about 1,000 vehicles per day.

EXHIBIT 8

TRAFFIC FLOW PROJECTION FOR 1990



Source: Area Transportation Planning Study
— Ministry of Transportation and
Communications, Nov. 1972

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On the rural sections of the main highways, trips are made up as follows:

- recreational purposes	75%
- work purposes	22%
- shopping, personal and others	3%

In the vicinity of the urban centres, work-oriented trips increased to 30 per cent.

Truck traffic varies from 5 to 10 per cent of total and tends to remain constant throughout the year, similar to work-oriented automobile trips. Predictably, recreational travel tends to fluctuate.

Exhibit 8, *opposite*, illustrates estimated traffic flow on the highway network in 1990. These estimates were prepared by the Ontario Ministry of Transportation and Communications, and are based on certain assumptions regarding the increase and distribution of population within the area and the increase in visitors attracted to, or passing through, the area. This exhibit shows there is likely to be considerable growth in traffic on the major corridors now served by highways 11, 17 and 71.

Employment

A breakdown of employment in Atikokan is shown in Exhibit 9, *overleaf*.

Over half the workforce is employed by the two iron ore companies. The two primary industries, mining and forestry, account for 63 per cent of total employment in the town.

EXHIBIT 9

EMPLOYMENT IN ATIKOKAN (1972)

		Number	%
Primary	- mining	1,015	51.0
	- forestry	255	12.8
Non-Primary	- retail services	186	9.3
	- education	125	6.3
	- Fed./Prov. Gov't.	67	3.4
	- accommodation	64	3.2
	- fuel	50	2.5
	- transport	48	2.4
	- Twp. services	46	2.3
	- hospital	45	2.3
	- financial	32	1.6
	- industrial suppliers	24	1.2
	- contracting	23	1.2
	- other	10	0.5
Total:		1,990	100.0

SOURCE: Atikokan - Ignace Highway Report - Ontario
Ministry of Transportation and Communications

EXHIBIT 10

CANADA MANPOWER VACANCIES FOR ATIKOKAN - OCTOBER, 1973

Sales Clerk	$2.35/hr
Labourer, Gen. Mine	3.57/hr
Diesel Mechanic	4.52-4.90/hr
Mining Machine Mech.	4.52-4.90/hr
Electrician or Apprent.	4.20/hr
Dump Truck Driver	4.42/hr
Motor-Vehicle Mech.	4.00/hr
Meat Cutter	2.68/hr
Mining Machinery Mech.	4.52-4.90/hr
Bartender	2.75-3.50/hr
Electrician Apprent. (1st or 2nd year)	2.50-2.75/hr (6 month job)
Clerk, Gen. Office	2.25/hr
Cook	2.34/hr

SOURCE: Canada Manpower - Port Frances

Canada Manpower does not have figures on the unemployment level in the town, but it is said to be relatively low. Generally, unemployed males tend to move from the area to seek work elsewhere.

There is currently a number of vacancies in the area, particularly for skilled tradesmen. A recent list of job opportunities, published by Canada Manpower, dated October 26, 1973, is shown in Exhibit 10, opposite.

For some years now, there has been no shortage of jobs for males, although opportunities for females have been, and still are, extremely limited.

Income

Per capita income figures for the Atikokan area are not available. The latest available figures for the Rainy River district are as follows:

1967	1968	1969	1970	1971
$2,100	$2,250	$2,700	$2,830	$3,080

Typical hourly wage rates for selected jobs are as follows:

- maintenance/diesel mechanic	$4.52 - $4.90
- dump truck operator	$4.23 - $4.42
- sawmill employee	$3.45 - $3.56
- unskilled mine worker	$3.36
- store clerk	$2.10
- bartender	$3.50
- barmaid	$1.90

Retail Trade

There are some major retail establishments in Atikokan, including Simpsons-Sears and Eaton's catalogue stores, and The Bay. Retail trading volume in 1971 totalled $11 million over the trading area population of 7,000. Thus, per capita retail expenditure amounted to $1,571 compared with $1,330 for the Rainy River District, $1,600 for Thunder Bay and $1,540 for Ontario.

MINING

The Town of Atikokan is heavily dependent, economically, on the two iron ore mining operations in the community, Steep Rock Mines Ltd. and the Caland Ore Co. Ltd.

Caland Ore Co. Ltd.

This company, a wholly owned subsidiary of Inland Steel Co. of Chicago, mines iron ore in the "C" ore body pit under a leasing arrangement with Steep Rock Iron Mines. Caland Ore Co. pays the latter a royalty of $1.75 per ton and ships its ore to the furnaces of Inland Steel in the United States.

Inland Steel has decided to obtain future supplies of ore from sources closer to their steel making sources, predominantly for economic reasons, and this will result in a phased shutdown of the Caland Ore Co. operation at Atikokan.

EXHIBIT 11

PROFILE OF CALAND ORE CO. LTD. WORKFORCE (November 1, 1973)

Occupation / Age Group	Tradesman	Equipment Operator/ Machinist	Mill Attendants And Labourers	Salaried Staff	Total	% of Workforce
18-21	3	17	84	2	106	25.7
22-25	12	13	17	3	45	10.9
26-30	17	11	8	5	41	9.9
31-35	15	11	5	7	38	9.2
36-40	14	14	3	9	40	9.7
41-45	18	5	1	15	39	9.4
46-50	18	9	2	13	42	10.2
51-55	7	14	2	7	30	7.2
56-60	4	4	3	5	16	3.9
61 +	11	2	0	3	16	3.9
TOTAL	119	100	125	69	413	100.0

SOURCE: Caland Ore Co. Ltd.

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The shutdown is expected to be in two stages:

- termination of pit operations in November 1976, affecting 200 workers
- shut down of the pelletizing plant in early 1978, affecting a further 200 workers.

Thus by early 1978, the Caland Ore operation will be fully terminated, with the resultant loss of 400 jobs. Based on present estimates, a profile of the redundant work force is shown in Exhibit 11, opposite.

Steep Rock Iron Mines Ltd.

Steep Rock Iron Mines Ltd. is a Canadian-owned company, currently mining iron ore in the Hogarth pit, which lies adjacent to the "C" pit leased by Caland Ore Co. Steep Rock employs in excess of 600 workers in its mine and pelletizing plant and ships approximately 1.5 million tons of ore per year to two major steel producers, Algoma Steel and Detroit Steel, under long term contract arrangements.

The Hogarth mine came into production in 1953, and is now approaching its economic mining limit. Steep Rock management is therefore planning to transfer its mining activities from the Hogarth pit to the "C" pit when Caland ceases operation. Since Steep Rock will not bear the significant royalty payment that Caland has had throughout its period of operation the economics of mining the "C" pit are more attractive to Steep Rock than to Caland.

EXHIBIT 12

AGE STRUCTURE OF STEEP ROCK IRON MINES' WORKFORCE (NOV. 1973)

Age Group	No. of hourly paid workers	No. of salaried staff	Total	% of Workforce
18 - 20	48	2	50	8.2
21 - 25	74	7	81	13.3
26 - 30	54	22	76	12.5
31 - 35	44	12	56	9.2
36 - 40	52	14	66	10.8
41 - 45	34	24	58	9.5
46 - 50	49	20	69	11.3
51 - 55	56	19	75	12.4
56 - 60	37	13	50	8.2
61 - 65	19	4	23	3.8
66 - 69	3	2	5	0.8
TOTAL	470	139	609	100.0

Source: Steep Rock Iron Mines Ltd.

The significance of this transfer operation will not, in itself, affect the employment situation in Atikokan in the short to medium term. Steep Rock expects to maintain an ongoing work force of approximately 600.

Particularly significant to the work force of Atikokan is how long Steep Rock will continue to mine in the area. Iron ore reserves in the "C" pit are claimed to be considerable, but long term mining prospects are dictated by economics as much as by the size of the ore reserves. Steep Rock management estimates that the "C" pit will remain an economic proposition until well into the 1980's.

A profile of the Steep Rock Iron Mines' workforce in 1973 is shown in Exhibit 12, opposite. It is clear that the age distribution of the workforce at Steep Rock is more balanced than that at Caland. This reflects the claim that workers at Steep Rock are generally more mature, with a longer average period of service, than those employed by Caland Ore Co.

Surrounding Mining Activities

There are only two mines in operation, of significant size, within a 100-mile radius of Atikokan - the Mattabi mine at Sturgeon Lake, 80 miles due north, and Shebandowan mine, 70 miles east.

The Shebandowan nickel mine, owned by the International Nickel Co. of Canada Ltd., was officially opened in July 1973, and employes 300 in an underground mining operation. The work force is secured essentially from the Thunder Bay area. The mine is currently experiencing a shortage of experienced underground miners and maintenance mechanics. It is

expected that the work force level will remain at the 300 level into the foreseeable future.

The Mattabi mine came onstream in 1972 and employs 250 in its open pit zinc, lead and copper mining operation. The work force is located either in Ignace or in the on-site camp. The mine has problems in attracting a stable workforce, particularly skilled tradesmen.

Mineral/Mining Potential

The area within a hundred and fifty mile radius of Atikokan is a significant and growing mineral production area. In 1970, nearly 65 per cent of all mining claims staked in the entire province were divided among the Kenora, Red Lake, Patricia and Thunder Bay mining districts.

The Division of Mines of the Ministry of Natural Resources has compiled a map that highlights areas displaying high mineral potential. This map pinpoints the immediate vicinity of Atikokan, and a belt running eastwards of the White Otter Lake area, to be of high mineral potential. Although surveys have identified deposits of gold, copper, nickel and lead in these two areas, exploration to date has not yet resulted in the discovery of significant economically viable deposits. At present, no known mining developments are planned in these areas.

The nearest area to Atikokan showing tangible mining development is the Sturgeon Lake region. Falconbridge Copper Ltd. is currently constructing an open pit mining operation, five miles east of the Mattabi mines property, that is planned to commence operation early in 1975 and to create jobs for 125 to 150 workers.

In addition, the parent company of Mattabi Mines Ltd., Mattagami Lake Mines Ltd., is currently considering development of a second mine in the same area. Plans are not yet finalized, but the prospect for such a development appears promising.

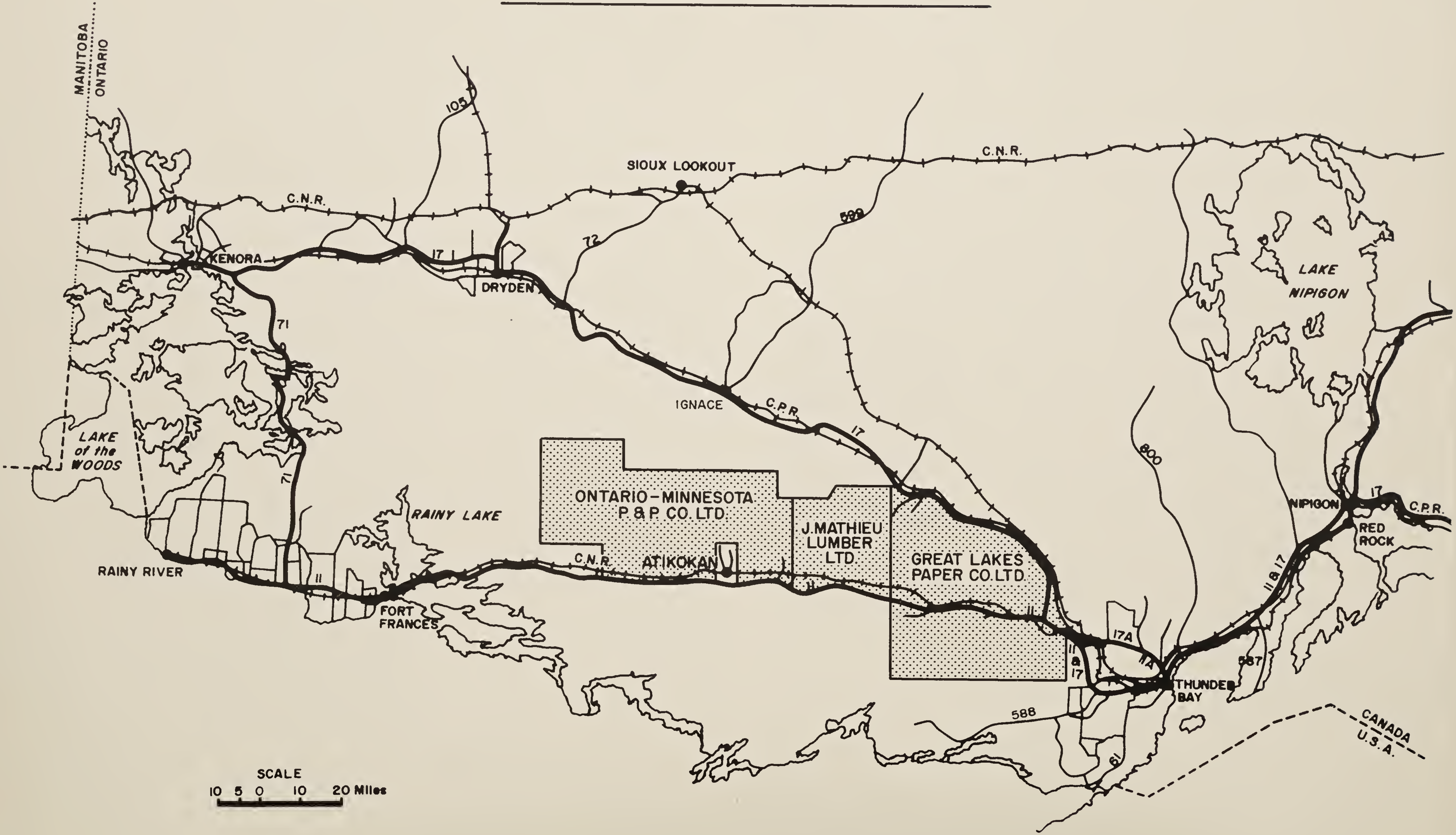
Further north, in the Lake St. Joseph area, Steep Rock Iron Mines is planning the development of an iron ore mine. Since 1956, the company has spent $1.3 million in exploration, sampling and metallurgical testing of the iron ores of the Lake St. Joseph deposit, and now confirms that substantially all of the iron content of the ore bodies can be produced in superconcentrates, grading 70 to 71 per cent iron. This is claimed to be an ideal form of melting stock for electric furnace steel production.

Development of this mine necessitates an expenditure of $300 million, and will require an initial production of 4 million tons of concentrates per year to be economic. Steep Rock market research studies indicate that a market exists in Canada for at least half of the output level and the remainder will need to be exported, mainly to the United States.

Currently, the Ontario Government's policy of restricting export of iron ore to a five year permit basis virtually eliminates the economic feasibility of the St. Joseph development. Potential customers require a contractural arrangement with suppliers that is not subject to a five year renewable clause.

EXHIBIT 13

TIMBER LICENCES IN FORT FRANCES TO THUNDER BAY REGION



FORESTRY

Coniferous species in the district of Atikokan have already been well harvested, and forestry potential for pine, spruce and balsam in the short term to medium term is limited. However there are importtant stands of poplar and some birch, which are being harvested at levels significantly below allowable cut levels.

The companies harvesting the areas around the Atikokan district are illustrated in Exhibit 13, opposite. This map is not compiled to show the exact limits of the harvesting areas, rather, it is included to indicate the location of Atikokan in respect to the major surrounding logging operations.

Ontario-Minnesota Pulp and Paper Co. Ltd.

Ontario-Minnesota is currently logging in the Rainy Lake and Seine River areas that lie 40 to 60 miles to the west of Atikokan. Logs from these areas are hauled by road to the company's plants as follows:

- groundwood mill in Fort Frances
- kraft mill in Fort Frances.

Approximately 800 workers are employed in these plants, and in the bush, and the company does not envisage increased employment opportunities in the foreseeable future. The company's rate of expansion is influenced strongly by the availability of the natural resource. Current logging activities are operating close to the maximum allowable cut level.

The poplar stands in the Atikokan area are said to be an underutilized species. Ontario-Minnesota is developing a new process which is expected to result in poplar fibres being used in the pulp and paper mills at Fort Frances in the next three years. Although this development will not lead to increased employment opportunities, it will lead to an increased utilization of the wood stands available in the area.

Domtar Ltd.

The timber area to the east of Ontario-Minnesota's licence is the Sepawe Crown Management Unit. This is being harvested under a volume agreement by Domtar Ltd. The company employs approximately 225 workers, mainly from Atikokan, in its logging operations and in a sawmill located in Sapawe. The sawmill produces 30 million board feet of lumber a year, mainly for U.S. markets, and 50,000 tons of wood chips that are shipped to Ontario-Minnesota's mill in Fort Frances and Domtar's mill at Red Rock.

The Sapawe mill is currently undergoing a $800,000 expansion program that is aimed at increasing lumber shipments to 35 million board feet in 1974 and 40 million board feet in 1975. The expansion program is centred around equipment modernization and replacement, and will not increase work force requirements.

Great Lakes Paper Co. Ltd.

The area west of Thunder Bay, to the eastern boundary of the Sapawe Crown Management Unit, is harvested under Crown timber licence by Great Lakes Paper. The company employs over 1,000 people throughout the region in its logging operations and central wood processing complex

in Thunder Bay. The processing complex comprises a newsprint mill, two pulp mills and one stud mill. The stud mill began operation in mid-1973 and operates a two-shift system, 25 workers per shift, in the production of 50 million board feet of lumber per year. The opening of the mill created a further 50 jobs in the woodlands operation.

The company is experiencing labour shortages, particularly in its woodlands activities, and labour turnover is high. A company-run commuter operation has been introduced recently from Atikokan to the woodlands area of Huronian, a distance of 40 miles. This will assist workers currently living in Atikokan as well as attracting new employees.

Great Lakes Paper has a $13.4 million expansion program planned for 1974 that includes:

- establishment of a $10 million wafer/particle board mill in Thunder Bay that will provide job opportunities for approximately 100 people
- doubling the stud mill capacity to 100 million board feet per year, and extending the mill's capability to handle railway ties.

A further $118 million expansion program, announced in November 1973, includes:

- expansion of the bleached kraft pulp mill to produce an additional output of 250,000 tons per year
- an additional doubling of the stud mill output to 200 million board feet per year.

In total, this will create an additional 1,200 jobs over the next two years.

RECREATION

Atikokan is situated in the centre of what is considered to be an area of outstanding wilderness beauty. Immediately to the south lies the 1,800 square mile Quetico Provincial Park, and to the north lies the White Otter/Sandford Lake region which has long been considered a prime area for recreational development. The general area has become increasingly popular in recent years, particularly for fishing and moose hunting, with many tourists coming from the northern states of the United States, notably Minnesota and Wisconsin.

Despite the apparent recreational potential of the area, hitherto, the economic benefit to the community of Atikokan has not been significant. This can be illustrated by examining the nature and extent of the recreational industry that has developed in the area, and the general amenities of the town that are geared to servicing the tourist industry.

The Town of Atikokan has not developed into a tourist centre. Historically, Atikokan has been a mining town, and its amenities have been developed for the inhabitants, rather than for visitors. The main road into the town, from Highway 11, is bordered by industrial and commercial developments, and the town core, while containing a range of stores, does not create a pleasing visual impact. The hotels and motels are geared more for the visiting mine and business personnel than for tourists, and there is no first class restaurant in the town.

EXHIBIT 15

TOURIST RESORTS AND OUTFITTERS - ATIKOKAN DISTRICT

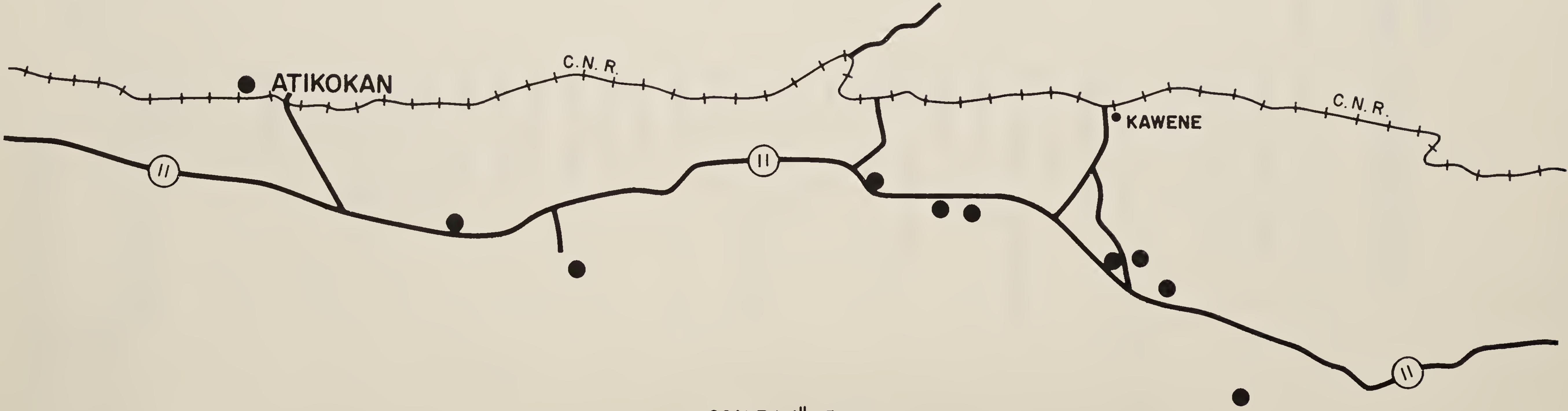
1. Alcorn's Resort - Sand Point Lake
2. Sand Point Cabins - Sand Point Lake
3. Bill Zup's Fish Camp - Lac La Croix
4. Campbell's Cabins & Trading Post - Lac La Croix & Sand Point Lake
5. Elizabeth Lessard Cabins - Namakan River
6. Indianonta Resort - Calm Lake
7. Clearwater West Lodge - Clearwater West Lake
8. Eddies Island Camp - Sandford Lake
9. Tip Top Lodge - Sandford Lake
10. Scotch Lake Resort - Upper Scotch Lake
11. Ernie Broeffle - Calm Lake
12. Pioneer Airways - Factor Lake
13. Seine River Resort - Banning Lake
14. McCauley Lake Resort - Little McCauley Lake
15. Adventure Canoe Trails - Lerome Lake
16. Caribou Resort Motel - Highway 11
17. North Country Outfitters - Nym Lake
18. Voyageur Canoe Outfitters - Nym Lake
19. Morris Camp - Niobe Lake
20. Roadside Lodge - Highway 11
21. Birchview Resort - Niobe Lake
22. Bon Aventure Resort - Niobe Lake
23. Crystal Beach Resort - Crystal Lake
24. Pioneer Airways - Crystal Lake
25. Crystal Lake Lodge - Crystal Lake
26. Eva Lake Resort - Eva Lake
27. Hillcrest Resort - Highway 11
28. Olson's Camp Quetico - Eva Lake
29. Quetico North Tourist Services Limited - Highway 11
30. Canadian Quetico Outfitters - Highway 11 & Eva Lake

SOURCE: Ministry of Natural Resources

I&T: 6 more

EXHIBIT 14

SELECTION OF RESORT ESTABLISHMENTS AND OUTFITTERS IN ATIKOKAN AREA



SCALE : 1" = 3 miles

Resort Establishment

Basically, the tourist industry that has emerged in the area, has developed outside the town perimeter. Exhibit 14, opposite, shows how the location of wilderness outfitters, lodges and resorts has tended to develop predominantly along a strip of Highway 11, east of Atikokan. A tabulation of the 30 resorts and outfitters in the Atikokan district is shown in Exhibit 15, opposite.

The resort establishments range from motels, providing accomodation only, to the fly-in tourist operations offered by the Tip-Top Lodge and Eddie's Island Camp, both of which are located on Sandford Lake, approximately 25 miles north of Atikokan. Most of the clientele are Americans, who come to the area for hunting and fishing.

Seasonality

The tourist industry in the Atikokan area is largely seasonal with most resorts operating over a six month period from May to November. Although there is no closed season for lake trout, rainbow trout, bass or pike, most anglers visit the area between spring and fall. There is some visiting in the winter season for ice fishing by staying at one of a few resorts that offer year-round accommodation facilities. It is likely that a closed season for lake trout will be introduced in 1974.

The moose hunting season in 1973 covered the period September 29 to November 15. Non-resident hunting was prohibited in the Thunder Bay district, south of the 49th parallel which runs approximately 15 miles north of Highway 11. Several local resort owners claimed that this restriction reduced their gross incomes by up to 30 per cent.

Canoe Outfitting

The lakes to the north of Atikokan, and those in Quetico Provincial Park, are claimed to provide some of the best canoeing facilities in Canada. The topography of the region is relatively flat and this, combined with the network of interconnecting lakes, attracts canoeists from a wide area of Canada and the U.S. Approximately 17 specialist outfitters, and combined resort/outfitting establishments, provide equipment, provisions, and sometimes even guides to the tourists interested in canoeing. No statistics exist showing the extent of this outfitting business, but local resort owners consider that current activity is only a small portion of the potential that could exist if the area were developed into a prime recreational area. Of particular frustration to these local resort owners is lack of Canadian economic benefit from Quetico Park.

Quetico Provincial Park

Despite the fact that the park lies within the Canadian border, it provides little economic benefit either to the Town of Atikokan or to Canada. The reason for this is clear. Over 90 per cent of the visitors are Americans entering the park from the southern entry points that are located close to the United States border. Thus of some 60,000 visitors to the park in 1971, it is estimated that less than 5,000 entered from Canadian entry points. The potential for development of recreational facilities is therefore substantially greater at the southern entry points than at the northern entry points.

EXHIBIT 17

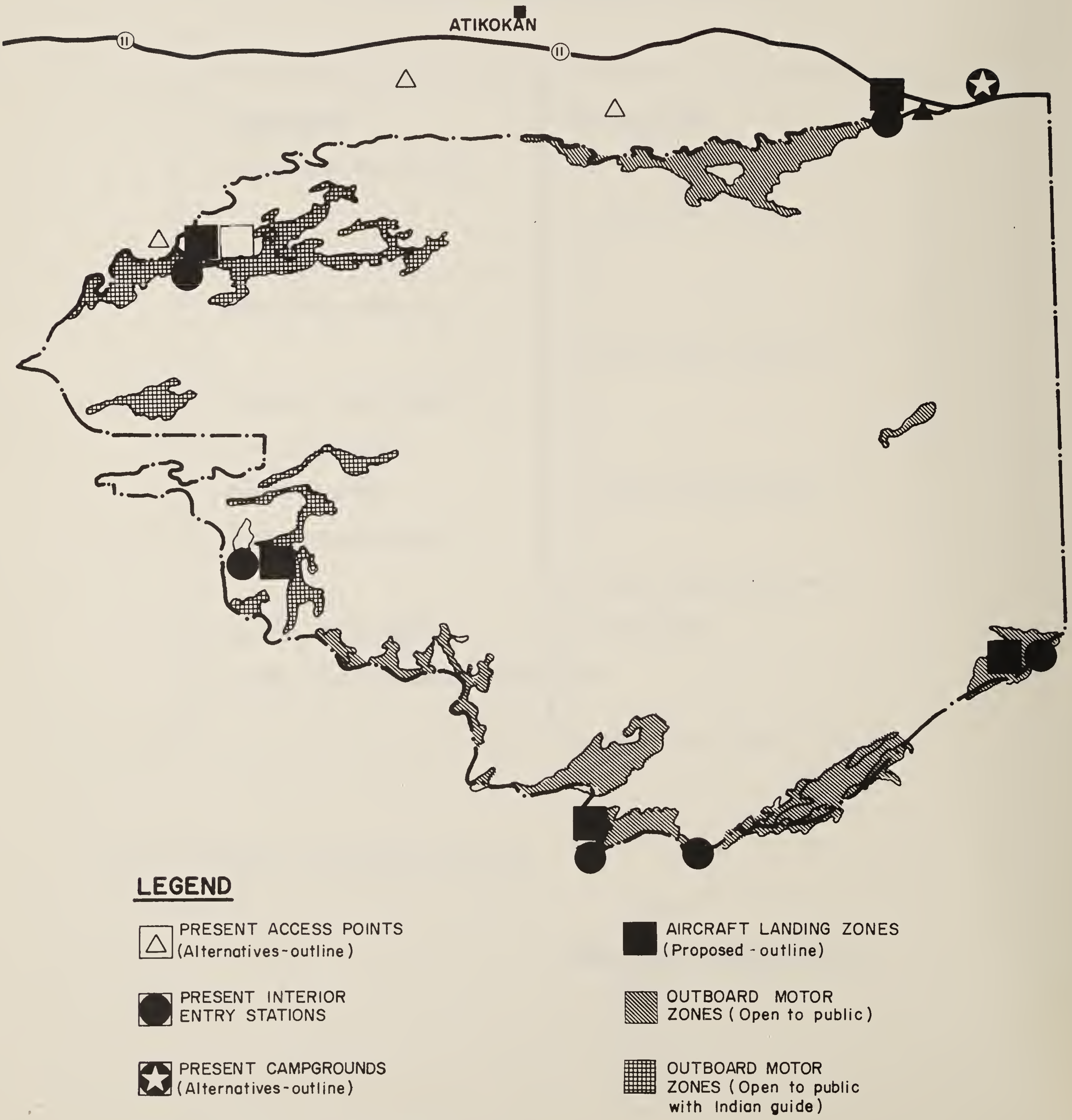
PRIVATE AND GOVERNMENT OPERATED CAMPGROUNDS IN THE ATIKOKAN DISTRICT - 1973

Campgrounds	No. Of Sites
Clearwater West Lodge	18
	10 additional proposed
Indianonta Resort	5
Seine River Resort	5
	10 additional proposed
McCauley Lake Resort	1
Town of Atikokan	20
Roadside Lodge	10 under construction
Crystal Beach Resort	10
	15 additional proposed
Crystal Lake Lodge	20 proposed
Dawson Trail (Quetico Park)	135

Source: Ministry of Natural Resources

EXHIBIT 16

QUETICO PROVINCIAL PARK


ATIKOKAN
11
11
LEGEND
△ PRESENT ACCESS POINTS (Alternatives-outline)
● PRESENT INTERIOR ENTRY STATIONS
★ PRESENT CAMPGROUNDS (Alternatives-outline)
■ AIRCRAFT LANDING ZONES (Proposed - outline)
▨ OUTBOARD MOTOR ZONES (Open to public)
▦ OUTBOARD MOTOR ZONES (Open to public with Indian guide)

Source: Report of the Quetico Park Provincial Park Advisory Committee

KATES, PEAT, MARWICK & CO.

The Town of Ely, lying 20 miles south of the Park, in Minnesota, is claimed to be a thriving community based economically on tourism. It is the nearest town to the Park's southern entry point, and has been developed to service the needs of the summer visitors. Whereas canoe outfitters in the Atikokan area have 20 to 50 canoes, the larger ones in Ely have several hundred. Generally, the resort operators of Atikokan view Ely's economic development, based on the tourist industry, with envy.

This economic disparity may be corrected as a result of the report of the Quetico Provincial Park Advisory Committee prepared for the Ministry of Natural Resources and the resultant government policy statement and developing master plan. The main recommendations of the Committee as it affects the economic development of Atikokan can be summarized as follows:

- entry to the Park through the north, by residents of the Province, to be encouraged by establishing additional access points
- in order to protect certain areas of the Park against over use, and to encourage greater use from Canadian entry points, a quota system to be adopted.

Exhibit 16, opposite, illustrates existing and proposed access points.

Camping

Private and government operated campsites in the Atikokan district are shown in Exhibit 17, opposite. In the past few years, an increasing number of campers have been attracted to the Atikokan area.

EXHIBIT 18

VISITORS TO RAINY RIVER, LAKE OF THE WOODS AND PATRICIA DISTRICTS 1971

Area	ORIGIN				EXPENDITURE ($)	
	Ontario	United States	Other Provinces	Total	Total	Per Visitor
Rainy River	45,000	634,000	80,000	759,000	23,400,000	30.83
Lake of the Woods	45,000	86,000	780,000	911,000	22,800,000	25.02
Patricia	45,000	82,000	60,000	187,000	4,600,000	24.59
TOTAL	135,000	802,000	920,000	1,857,000	50,800,000	27.36
Ontario	50,282,000	22,697,000	9,270,000	82,249,000	1,307,000,000	15.89

SOURCE: Tourism Statistical Handbook 1973 - Ministry of Industry and Tourism

A Crown land survey of Northwestern Ontario, conducted in 1972 by the Ministry of Natural Resources, estimated visitor days for Atikokan during the summer season at 92,300. It should be noted that the survey results relate only to a selected sample of sites and do not take account of visitors to private resorts or "bush" campers. According to leading residents of Atikokan, each year increasing number of visitors camp in the bush, gaining access by abandoned lumber roads, leaving behind an accumulation of refuse. Moreover, many of these visitors bring provisions with them thereby creating little economic benefit to the local community.

The natural environment characteristics of Atikokan appear to be the main attraction to visitors. Results of the Crown land Survey showed the major reasons for campers visiting a particular site in Atikokan as:

- fishing	51%
- private	19%
- good beaches	21%

Recreation in Surrounding Areas

The area lying within a 150-mile radius of Atikokan, to the west and north, is one with significant recreational activity. The area comprises the three districts of Rainy River, Lake of the Woods and Patricia. In these districts, tourism is the third largest industry in volume of dollar earnings and numbers employed. Visitors to these areas, by origin, and their expenditure levels for 1971 are shown in Exhibit 18, opposite. There are no published breakdown of these expenditures by

EXHIBIT 19

ITEMIZED TRAVEL EXPENDITURES IN ONTARIO IN 1971 OF TOURISTS FROM ONTARIO AND THE UNITED STATES TRAVELLING BY CAR

Expenditure Category	Per Cent Of Total Expenditure	
	Ontario Tourists	U.S. Tourists
Automobile	17.9	14.8
Accommodation	17.1	33.9
Food	14.6	31.2
Household supplies	9.7	20.1
Souveniers/gifts	4.8	
Clothing & accessories	8.2	
Other	27.7	
TOTAL	100.0	100.0

Source: Tourist and Recreation Studies Branch
Ministry of Industry and Tourism

category in the Rainy River district, but figures for the total province are shown in Exhibit 19, opposite.

Clearly, the Rainy River district tourist industry is almost wholly dependent on American visitors. The latter accounted for approximately 84 per cent of all visitors to the district in 1971, and were responsible for $20,000,000 of the total tourist expenditure there. The increasing popularity of Rainy River district to Americans is due to its proximity to the major centres of Minnesota and Wisconsin. The border crossing point at Fort Frances, by air, is 582 miles from Milwaukee, 306 miles from Minneapolis and 165 miles from Duluth.

The increase in American tourists entering the area by road is highlighted by comparative figures for the years 1962 and 1971. In 1971, 202,000 non-resident vehicles crossed the border point at Fort Frances, representing an increase of 51 per cent over 1962.

The tourist industry in the three districts is centred, largely, around a six month period from May to November, when visitors can enjoy the region's good fishing, boating, camping and hunting facilities. However, a modest winter tourist industry has emerged over the years, concentrating mainly on ice-fishing, snowmobiling and the ski facilities of Kenora and Minaki.

MANUFACTURING

Manufacturing industry in Atikokan is minimal. Apart from the two pelletizing plants operated by Steep Rock Mines Ltd. and Caland

Ore Ltd., only four manufacturing operations have been identified. Two of these manufacture products for the recreational industry - namely fibreglass canoes and wooden paddles.

The canoe manufacturing facility was initiated in 1973 by an enthusiast with experience in both competitive canoeing and canoe building. The main emphasis lies in producing high quality racing canoes, and product acceptance to date has been high. The operation is currently small, comprising the owner and his son and daughter. The main problem facing the company is in developing the business to meet demand. Sears Roebuck, in the United States, and a Canadian sporting goods agent have both expressed interest in handling the products, providing the minimum potential is several thousand units per year. At present the production capability of the facility is approximately 1,000 units a year, although several planned additions to the workforce could double this figure. A key determinant influencing expansion of the business is the overall financial and business management capabilities of the company.

The paddle manufacturing operation is run by the brother of the owner of the canoe manufacturing company. The business is similar to that described above, with current production levels running far below market potential.

Both companies require injection of management skills and capital, if their potential success is to be realized.

There are two additional small manufacturing facilities in the town:

1. A.R.C. Industries, employing several handicapped people in the production of craft work and fishing tackle. This is considered a training/therapeutic establishment rather than a commercial operation.
2. Quetico Tackle and Sports Ltd., employing 15 workers in the production of fishing tackle.

SUMMARY

The decision to close the Caland operations in Atikokan appears to be irrevocable, thereby resulting in the loss of 200 jobs in 1976 and a further 200 jobs in 1978. The impact of the closure on the town can be assessed as follows.

In 1976, the town will suffer a loss of income due to the fact that the earnings of the town's work force are effectively reduced by approximately $1.75 million. The full economic impact of this on Atikokan depends on just how much of this income has been spent in the town.

The 1976 shutdown affects the open pit mining operation and not the pelletizing plant. It is expected that many of the open pit workers, who generally have more years of service with the mines than their counterparts in the pelletizing plant, will exercise their seniority and transfer to the pelletizing plant. This means that many of the workers laid off in 1976 will be those currently employed in the pelletizing

plant. Since many of the workers in this plant are young, single men who tend to spend less money on goods and services in the town than do more mature workers, the economic impact on Atikokan will be less significant than if, say, the mine's skilled tradesmen were laid off.

From an unemployment viewpoint, the situation in 1976 is not expected to be critical. Since many workers in the pelletizing plant tend to transient, working for just a short period in a variety of jobs in various places, it is expected that there will be a tendency for them to move away from Atikokan to find work elsewhere. A union representative at Caland holds the view that, in 1976, the number of effectively unemployed workers in the town, resulting from the closure, will be approximately 60 rather than 200.

In 1978, when the pelletizing plant ceases operating, the situation will be more severe. Then, the remaining 200 workers will be laid off, many of whom will be skilled tradesmen. If alternative jobs are not available locally, the negative economic impact upon the town will be more significant than that in 1976.

In its publication entitled "What Increased Manufacturing Employment Means to Community Growth", the Research and Development Department of Canadian National Railways indicates the impact of increased manufacturing employment upon a community. Assuming that the negative multiplier worked in a manner similar to the positive multiplier then the loss of the 400 jobs at Caland would result in the following negative impact upon the Atikoan area:

- population	1,920
- households	450
- school enrollment	500
- retail establishments	16
- retail sales (1961 dollars)	$1,425,000
- motor vehicle registration	500
- employment	600 (including the original 400 jobs)

It must be borne in mind that the information presented in the table above is from a study undertaken by Canadian National Railways using 1961 Census data. Nonetheless, it does provide a rough approximation as to the potential impact of the mine closing on the Town of Atikokan.

Effect Of The Closure Of The Steep Rock Facility

Steep Rock Iron Mines Ltd. estimates that the company will continue mining in the Atikokan area until well into the 1980's. Therefore, within a maximum 10 year time frame from the Caland closure, a further 600 local jobs will be lost. While the Caland closure will impact significantly upon the economic base of Atikokan, the subsequent closure of Steep Rock's operations will have a disastrous effect - on the assumption of no alternative job opportunities being created locally. It is conceivable that Atikokan would become non-viable, or perhaps only viable at a population level of 1,000 to 2,000, if steps are not taken to improve the area's economic base.

II - TOURIST INDUSTRY DEVELOPMENT POTENTIAL

THE ELY MODEL

The business community in Atikokan views the town of Ely, Minnesota as a model on which to base the development of Atikokan's tourist industry. It is therefore relevant to examine briefly the recent history of Ely and the extent to which tourism has impacted on the economic development of the town.

History of Ely

In the past 13 years, Ely suffered twin economic blows. The first was the creation of the Boundary Waters Canoe Area (BWCA), by the U.S. government, with the purpose of preserving the wilderness resource for future generations. This resulted in the closure of a larger number of resorts, located within the area, and travel into the BWCA, except by canoe, was prohibited.

The second blow followed almost immediately. In 1965 underground iron ore mines, which had been Ely's economic mainstay for years, were closed and several hundred miners laid off. Although the setbacks were significant, they were not disastrous. A number of older miners exercised their early retirement option, some younger miners left the area altogether, and the majority went to work in the taconite mines some 20 miles from Ely. Nevertheless, the town realized the continued vulnerability of the town's work force with continued reliance on this industry.

In 1968 an action group of Ely citizens was formed to determine an appropriate strategy for the development of the town. From this group came officers for an Ely Development Council. The first task of the Development Council was to initiate a community wide "paint up and fix up scheme" to enhance the overall appearance of the town. Subsequently the Council arranged a symposium on tourism, with guest speakers from a variety of tourist organizations, to discuss ways and means of stimulating the industry in Ely.

Ely in 1973

It is interesting to note that Ely is still heavily dependent on mining to provide employment to the local work force. The following table, taken from U.S. employment statistics, illustrates the levels of employment in Ely provided by various industry categories in 1971:

Category	Numbers Employed
Construction	76
Manufacturing	78
Durable Goods	68
Transportation	14
Utilities	31
Wholesale/Retail	405
Finance/Insurance	51
Professional	242
Education	153
Public Administration	58
Mining	579
Total Work Force	1,534

These figures show that approximately 38% of the work force is engaged in mining. No separate category exists for the tourist industry and the Ely Chamber of Commerce claims that this industry does not

EXHIBIT 20

TOURIST RESORTS AND ESTABLISHMENTS IN ELY IN 1973

Type of Establishment	Number
Vacation resorts	51
Motels	7
Outfitters	18
Campgrounds/trailer parks	15
Outward bound school	1
Restaurants	4
Night Clubs	4

SOURCE: Ely Directory published by Ely Chamber of Commerce provide significant employment in the town.

There is no question that Ely has a buoyant tourist industry, and an inventory of resorts and establishments is shown in Exhibit 20, opposite. However, while tourism generates revenue in the town, it provides only limited employment opportunities, and these opportunities are essentially seasonal.

This statement is supported by an analysis of two major tourist operators who were interviewed in a field visit to the town. Canadian Waters Incorporated is the largest outfitting establishment in Ely. The operation comprises a retail store, which sells a variety of recreation equipment, and a 230 canoe outfitting facility. In addition, the company has a mail order operation which is used essentially in the winter months to offset the seasonal aspects of the retail store and the outfitting facility.

It is estimated that the company has a gross revenue of approximately $500,000 a year. Five people are employed on a year round basis and a further 25 people are recruited in the peak summer months of June to September inclusive. Virtually all the summer employees are high school students. The leakage effect of the revenue generated by this operation is considerable. Virtually all of the goods and supplies required are purchased from outside the Ely area. This would include all the goods sold in the retail establishment, as well as canoes, tents, rucksacks, and other equipment that is used in the outfitting facility. Since

it is not permissible to take cans and bottles into the BWCA even the food supplied to the canoeing tourists is in freeze-dried form and is obtained from such major centres as Chicago and Minneapolis.

It is interesting to note that this particular outfitter considered setting up an outfitting facility in Atikokan. However, after assessing the existing level of tourism in the Atikokan area, and future potential, it was decided that such an operation would not be viable.

Canadian Border Lodge claims to be one of the more successful resort operators in the area. The resort is family run by the proprietor and his wife, similar to most resorts in the area, and is a seasonal operation between May and October. During the summer months, employment is provided for approximately seven high school students. The proprietor was not willing to discuss revenue generated by his resort, but he indicated that if the operation showed a net profit of $10,000 in a given year, it was considered a good year. It should be noted that this resort has an average occupancy rate of 95% over the whole summer season.

This particular resort owner claims that, despite the fact that the ratio of vacation resorts to outfitters was approximately three to one, the outfitting establishments generated, on aggregate, more revenue. He claimed that the resorts bring more economic benefit to the region than did the outfitters because resort owners buy most of their supplies from town, and visitors to the resorts tend to spend more money in the retail establishments, restaurants and night clubs in the

town. It is claimed that visitors coming for canoeing vacations, arrive in town, obtain their equipment from the outfitter and paddle off into the BWCA and Quetico Park without using the town's amenities.

In 1967, a New York travel consultant compiled a feasibility study for the establishment of a first class resort in the Ely area. The report concluded that the potential for a 150-room luxury resort complex was extremely good, and economically viable. It is interesting to note that such a complex has not yet been constructed and the town still has no first class accommodation facilities.

Summary

It can be concluded therefore, that while the town of Ely has a bouyant tourist industry, the industry is seasonal, it does not provide significant employment opportunities in the town, and while it generates a significant amount of revenue much of this revenue is not expended in the area. Many of the tourist operators are attempting to stimulate winter tourism. There is an increasing demand for snowmobiling in the area but this tends to be concentrated at the weekend. There is also an increase in snowshoeing and cross country skiing, and downhill skiing is available at the nearby Hidden Valley recreation area.

TOURISM AS A REVENUE/EMPLOYMENT GENERATOR

Employment Generated

The significance of the tourist industry as an employment generator is illustrated by examining average employment figures by

EXHIBIT 21

EMPLOYMENT FIGURES BY TYPE OF TOURIST ESTABLISHMENT (YEAR-ROUND) IN ONTARIO - 1971

		STAFF PER ESTABLISHMENT		
TYPE OF ESTABLISHMENT	AVERAGE UNITS PER ESTABLISHMENT	FULL-TIME	PART-TIME	YEAR-ROUND EQUIVALENT *
Motel	17.4	3.1	2.3	4.25
Resort/Lodge	9.6	3.0	8.1	7.05
Cottage	8.4	3.4	1.4	4.1
Cabin	6.6	2.5	0.7	2.85
Other	7.5	2.0	1.2	2.6
Total and Average of all Establishments:	14.8	3.1	2.9	4.35

Source: Tourist and Recreation Studies Branch, Ministry of Industry and Tourism

* Assuming part-time employee is equivalent to 0.5 full-time employees.

type of tourist establishment in Ontario in 1971. Exhibit 21, opposite, shows average employment figures for year-round operations with resorts/lodges generating the most number of jobs per establishment. However in Ontario it is estimated that some 73% of tourist establishments operate only on a seasonal basis. It is, therefore, more relevant to examine Exhibit 22, overleaf, which shows average employment figures for various types of seasonal tourist establishments in Ontario in 1971. Taking resort/lodges as an example, each establishment has on average 14.7 units. Average staffing would include 4.6 persons on a full time basis and 7.3 persons on a part time basis. Assuming one part time employee is equivalent to half a full-time employee, 8.25 persons are required for the season. Assuming that a season runs for five months of the year the number of jobs provided on a year round equivalent basis is estimated at 3.44. Clearly, seasonal tourist establishments do not in general provide significant job opportunities. Moreover, the opportunities that do occur are of a short-term nature and are filled either by housewives and/or high school students.

This overall picture for Ontario is supported by an economic base study of the district Municipality of Muskoka, prepared by Stevenson & Kellogg Ltd., and dated May, 1973. This study estimated that in the summer of 1970, a total of 1,111 persons were employed in the 277 accommodation establishments in the region. This approximates to four jobs per establishment and the study noted that about half of the total employed in the area were working proprietors and their families.

EXHIBIT 22

EMPLOYMENT FIGURES BY TYPE OF TOURIST ESTABLISHMENT (SEASONAL TYPE) IN ONTARIO - 1971

TYPE OF ESTABLISHMENT	AVERAGE UNITS PER ESTABLISHMENT	STAFF PER ESTABLISHMENT			
		FULL-TIME	PART-TIME	AVERAGE PER SEASON *	AVERAGE YEAR-ROUND **
Motel	13.4	2.5	2.3	3.65	1.52
Resort/Lodge	14.7	4.6	7.3	8.25	3.44
Cottage	6.8	2.2	1.2	2.8	1.17
Cabin	9.7	2.2	1.0	2.7	1.12
Other	10.4	1.8	0.2	1.9	0.79
Total and Average all Establishments	8.74	2.6	2.2	3.7	1.54

Source: Tourist and Recreation Studies Branch
Ministry of Industry and Tourism

*Assuming part-time employee is equivalent to one full-time employee

**Assuming average season equals 5/12 of one year

EXHIBIT 23

ESTIMATED ANNUAL REVENUE GENERATED BY TYPE OF TOURIST ESTABLISHMENT - ONTARIO 1970

TYPE OF ESTABLISHMENT	REVENUE ($)
Motel	40,945
Tourist Courts and Cabins (including hunting and fishing camps, recreation camps) without outfitting facilities	6,380
Outfitting Establishments (with accommodation)	19,887
Tourist Homes	5,820
Private and Municipal Campgrounds	11,451
Federal and Provincial Campgrounds	31,429

Source: Statistics Canada 63.204

Revenue Generated

Estimates of the annual revenue generated by various types of tourist establishments in Ontario in 1970 are illustrated in Exhibit 23, opposite. It should be pointed out that these figures must be interpreted with extreme caution. There is a problem in classifying various types of establishments into clearly defined categories, and a particular type of tourist establishment could be included in one of several categories depending upon the number of accommodation units in that establishment. The relatively low revenue figure for tourist courts and cabins is claimed to be due to the fact that there are a large number of very small operations in Ontario with the basic minimum of three accommodation units, and those establishments with outfitting facilities are classified separately under outfitting establishments. In addition, resort lodges with six or more hotel type rooms are classified as a hotel and there is no breakdown of this latter category to identify lodges specifically.

The Muskoka region study, referred to earlier, estimates the total revenue of the 277 accommodation establishments at $8.4 million. However, this figure applies to all establishments having three or more rooms, cabins or cottages, and would therefore include hotels, motels, lodges, cabins and commercial cottage establishments.

In view of the qualifying statements made in respect to the average revenue generated by type of establishment it should be stressed that the figures contained in the foregoing exhibits are approximations, and these figures could vary considerably depending upon the size and type of resort establishment.

Multiplier and Leakage Effects

When considering the revenue-generating aspects of the tourist industry, it is important to realize that not all of this revenue is net income to the locality. Some of the income is used to buy goods and services produced locally, and a portion of it is used to pay wages, salaries and rents to members of the local community. However, some of the income is leaked outside the area to buy goods and products necessary to service travellers, and to provide facilities. The proportion of gross income that is leaked outside an area depends upon the breadth of economic base of that particular area. Generally, the more developed the economic base of an area, the lower the proportion of leakage of total income generated.

Moreover, the proportion of leakage can depend upon the type of tourist operation. This is illustrated by the situation in Ely, where the canoe outfitters have a higher propensity to spend a greater proportion of their total revenue outside the town than do resort owners, because the types of goods required by the former are not available within the town.

The extent to which the economic benefit of the tourist industry is 'multiplied' within the community is a function of the magnititude of the leakage effects since only that proportion which remains to be spent within the community can in fact be multiplied.

In determining the local income created by tourism, it is not necessary to trace out individual spending elements. The following

simple equation has been devised to determine total income increase:

$$\text{Total income increase} = A \text{ multiplied by } \frac{1}{1-BC}$$

Where: A = proportion remaining in area
B = proportion of income that local people spend in local goods and services, e.g. propensities to spend locally, and
C = proportion of expenditures of local people that accrues as local income.

(See "Economics of Outdoor Recreation", by M. Clawson and J. Knetach, the Johns Hopkins Press, Baltimore, 1966)

This equation may be illustrated by using some simple figures. Firstly, it is assumed that for every dollar of expenditure made in the community, one-half is for goods and services produced locally, and the other half represents the leakage effect. Assuming that the propensity to consume locally is 0.4 for the community, and that the income created in the form of wages and salaries per dollar of local sales is 0.6; the total income increase is as follows:

$$\text{Total income increase} = \$0.5 \times \frac{1}{1-(0.4 \times 0.6)}$$

$$= \$0.66$$

Under these assumptions, for every dollar received from tourism expenditures, the resulting increase in local income is $0.66.

TOURISM
POTENTIAL IN ATIKOKAN

Clearly, Atikokan is an area showing potential for increased tourism activity. It offers a wide range of recreation opportunities

including hunting, fishing, canoeing, boating, camping. Its proximity to the U.S. and the entry point at Fort Frances locates it within range of the American tourist market, and the importance of this access to the U.S. market is reflected in the fact that over 80% of the visitors to the Rainy River District in 1971 were Americans.

The economic development potential of the tourism industry in Atikokan depends on three main factors:

1. Maximization of expenditures by those tourists currently vacationing in the area.
2. Increasing tourism in the area within levels commensurate with facilities and amenities that currently exist, and those that will be planned in the future.
3. Extension of the tourist industry as far as possible to a year-round operation rather than a seasonal operation.

Benefits from Existing Industry

To date, the Town of Atikokan has benefitted little from the summer tourism in the surrounding area. Essentially, this is due to the fact that Atikokan has little to offer tourists. The town itself, and the approach to the town via Highway 11B, do not have the visual appeal that would encourage tourists to visit and stay in the town. Moreover, the town has limited accommodation establishments, no first-class restaurants, and few retail outlets that are geared to servicing tourists' wants. The situation can be summed up by the comments expressed by a leading local businessman who claims that: "Tourists generally drive into the town, look around for a few minutes, and then quickly drive out again.".

Visitors to the area generally stay at one of the resorts that are located either along Highway 11 or on the lakes north of Atikokan, and those with travel trailers or campers use one of a number of disused lumber trails to gain access to a natural campsite in the bush. In summary, therefore, the economic benefit of the visitors to the area is extremely small. At best, some of the revenue generated by the resort owners is spent in the town, and a limited number of seasonal job opportunities are available, but these are largely restricted to housewives and/or high school students. Since most visiting campers come fully equipped and provisioned, the economic impact upon Atikokan accruing from this form of tourism is, also, minimal.

It is fundamental, therefore, that before Atikokan can expect to benefit economically from tourism, the town must:

- provide a reason (or reasons) for tourists to visit Atikokan
- establish income-generating facilities.

Increased Tourist Activity

The extent to which the town can increase its involvement in tourism is dependent upon a number of factors. One of these is the timing and extent to which the recommendations of the "Report of the Quetico Provincial Park Advisory Committee", report to the Honourable Leo Bernier, Minister of the Ministry of Natural Resources, May 26, 1972, are implemented. It is questionable whether opening up new entrances in the northern area of the Park (as recommended in the Report) will, in itself, generate more tourism. It does not appear unreasonable to assume that those visitors who would naturally enter the Park from the

north will do so regardless of whether there are one, two, or even three entrances. It therefore appears that the relatively low level of use of the northern areas of the Park is a function more of the number of visitors attracted to the Park from the north, than it is of the number of entry points.

However, the opening of new entry points in the north, combined with quota restrictions on the southern entry points from the United States, might result in better utilization of the Park's northern areas. The underlying assumption is that tourists who cannot gain entry through the south will be motivated to travel to the Atikokan area to gain access from the north. Much would depend upon the way in which the quota system were administered at the southern entry points. If the system were operated on a first-come, first-served basis, then it is possible that many of those refused entrance in the south would not travel to the northern entry points. This is because the southern entry points are located within the boundary waters canoe area where access can only be gained by canoe. This means that visitors intent on visiting the Park are already outfitted with canoe, tent, and provisions and this commitment to the Park would probably result in the vacationer remaining within the BWCA. If, on the other hand, the quota system were administered on a pre-booking basis, then there is more likelihood of tourist traffic being diverted into Canadian entry points.

If a pre-booking system were instituted, the location of Atikokan therefore becomes an important factor. Many of the tourists currently visiting the BWCA travel from the Illinois, Ohio, and

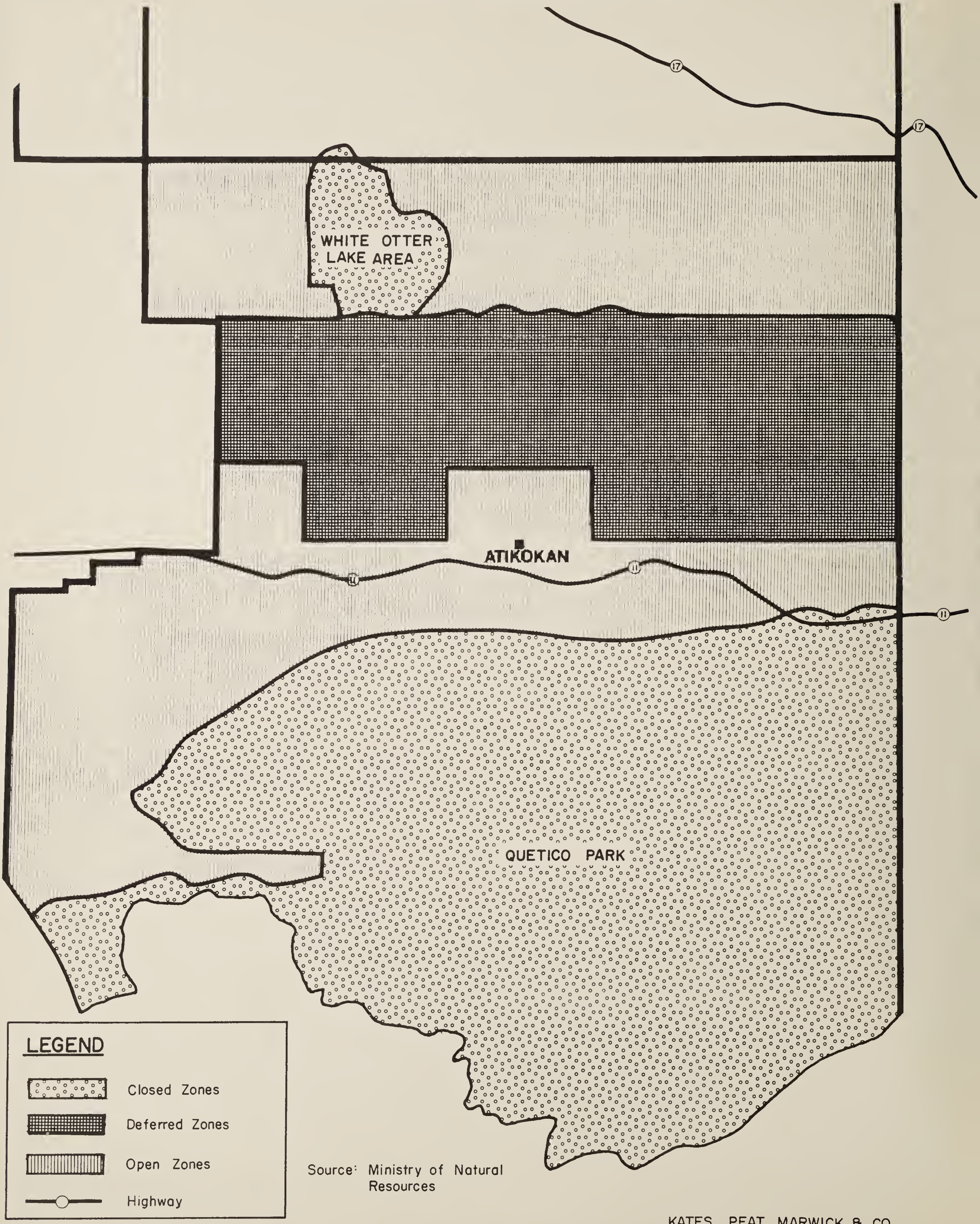
Minnesota areas. In order to reach the Atikokan area, it would be necessary to add approximately three to four hours to their total travelling time. In some cases, this would mean that the journey from home to destination would require more than one day's travel and could effectively reduce the vacation time by two days in total.

Estimation of the portion of tourists that could be diverted from the Ely area is difficult. For example, the Area Transportation Study prepared in 1972 by the Ministry of Transportation and Communications concluded that a large population within 125 miles of the tourist area is a critical requirement in developing a viable tourist industry. However, the distance a tourist is willing to travel to reach a particular tourist area is dependent upon the natural attractions of the tourist area. Since a canoe/camping vacation appeals to a relatively small segment of the tourist market, it is probable that people interested in this type of vacation will not be adversely influenced by a few extra hours of travelling time. This is evidenced by the fact that many visitors attracted to the canoeing facilities of the Ely area are subject to an eight-hour drive to reach the area.

The locational problem of Atikokan in respect to the major U.S. markets would be reduced if new border crossing points were established, either to the west or east of Atikokan, closer to the town than the existing border crossing points at Fort Frances and Pigeon River. This would necessitate not only the construction of a new road, or roads, in Canada to the east and/or west of Quetico Park, but also construction

EXHIBIT 25

RECREATIONAL ZONING PLAN - 1973

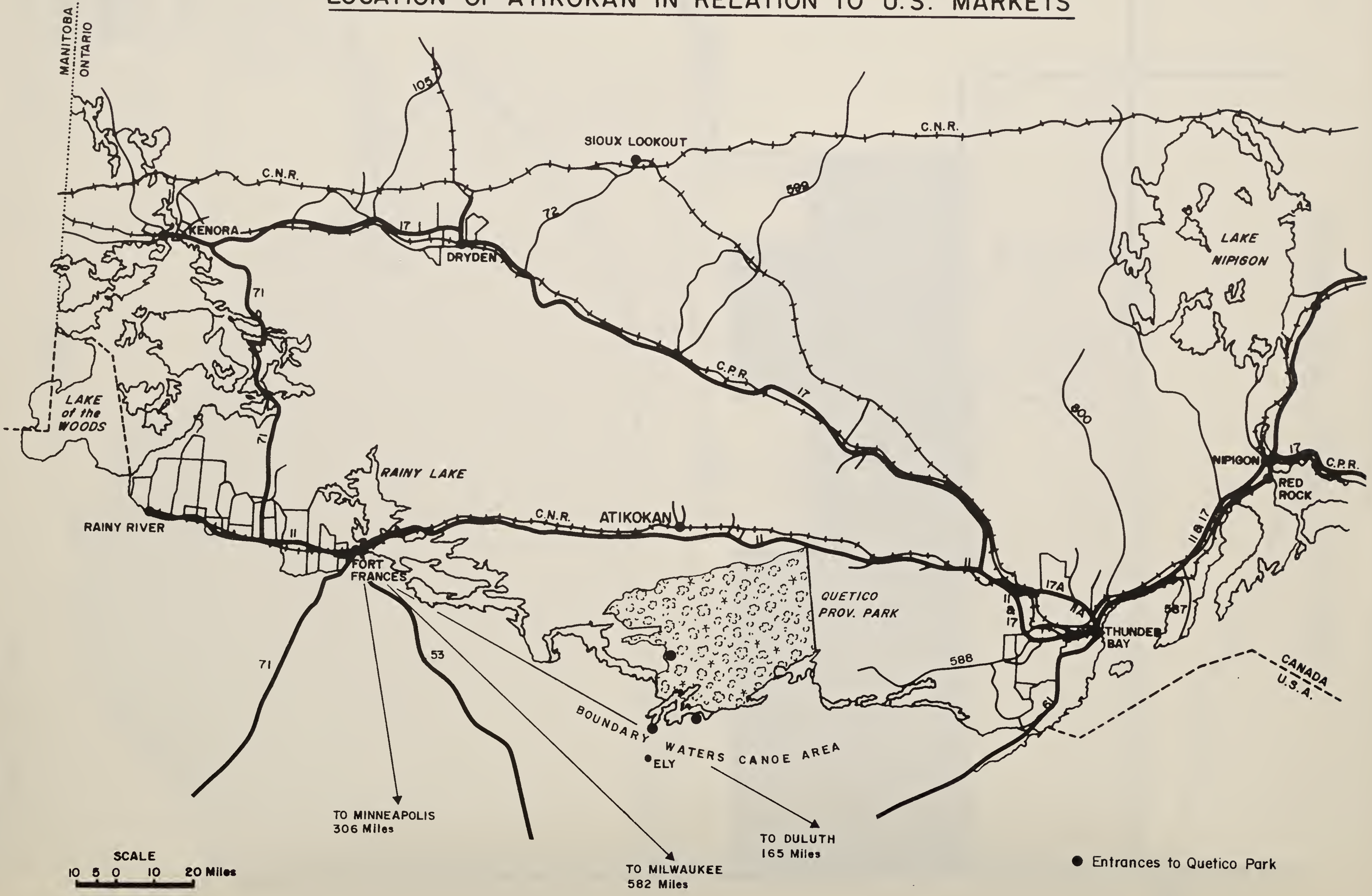


Source: Ministry of Natural Resources

KATES, PEAT, MARWICK & CO.

EXHIBIT 24

LOCATION OF ATIKOKAN IN RELATION TO U.S. MARKETS



SOURCE: K.P.M.

KATES, PEAT, MARWICK & CO.

of a connecting road or roads in the United States. A map of the area is shown in Exhibit 24, opposite.

In our discussions with the Minnesota State Transportation Department, it was pointed out that almost the entire area lying between Highways 53 and 61 in the state has been designated a wilderness area, and the probability of new road construction there is extremely remote. Plans are being formulated to upgrade Highway 53, to Fort Frances, into a four-lane road, but this will not materialize, if at all, for at least five years.

Land Use Planning

A major factor influencing increased tourist activity in the Atikokan area is the development of a land use plan that establishes a recreational zoning plan and defines the type and extent of development that is to be permitted in the area. The current recreational zoning plan is shown in Exhibit 25, opposite. It can be seen that there are three basic zone areas; these are as follows:

- a closed zone in which no commercial development is permitted; these two areas are the Quetico Provincial Park and the White Otter Lake area
- a deferred zone in which construction of permanent dwellings is not permitted; however, single temporary dwellings are permitted on a yearly renewable permit basis
- the open zone in which commercial development is allowed.

If the recreation potential that exists in the area is to be realized, a new land use plan is required. Such a plan would need

to be much more detailed than the existing zoning plan. Firstly, it is necessary to assess how the area can be developed to enable tourists to gain maximum recreational benefit from the area while ensuring that the beauty of the semi-wilderness environment is retained.

It may be decided, for example, that the White Otter Lake area is to be designated a family recreation area, because of its beautiful lakes and stretches of sandy beaches. It may also be decided that the area lying south of White Otter and north of Atikokan, because of its network of inter-connecting lakes, is an area that is to be restricted to canoeing, fishing, and hunting.

The area surrounding the White Otter Lake might continue to be classified as an open zone, although the limits may differ from those that exist at present, in which case commercial establishments such as lodges, vacation resorts and campgrounds would be permitted.

In addition to an overall zoning plan, it is conceivable that a particular lake or area could be zoned differently to that of its immediate surroundings. For example, within a given open zone there may be a lake that might provide exceptional fishing characteristics and it would not be in the interests of the overall zoning plan to allow commercial recreational developments in the immediate area. Moreover, each open zone might be planned such that restrictions are placed on the extent and type of development within certain areas. For example, cottage developments might be restricted to specific lakes and the density

of cottages would need to be clearly controlled. This micro-zoning approach would ensure that the natural environment in the area surrounding Atikokan is closely controlled.

Part of the land use plan requires an evaluation of the need for the establishment of a road system to gain access to specific areas. If it is decided that the White Otter area is to be developed for family-type recreational facilities, visitors must be provided with access to the area. Such an evaluation would not only consider the need for a road from Ignace to Atikokan, it would also need to consider whether a series of branch roads is required to reach specific areas. Construction of a single highway between Atikokan and Ignace might result in a strip type of commercial development that exists currently on Highway 11. Thus, it may be concluded that a secondary access road be constructed, from the main highway to the border of the White Otter Lake zone, in order to enable families to gain access to the beaches, lodges, cottages, etc.

Year-Round Tourism

The current tourist industry in Atikokan is essentially seasonal, covering the period of mid-May to mid-October. Obviously, the more the area can be developed into a year-round recreational area the greater will be the potential impact of the tourist/recreation sector. The area does offer potential for snowmobiling, snowshoeing, cross-country skiing, and ice fishing, but these facilities have not yet attracted significant volumes of winter tourists. All of these

activities are increasing in popularity but have not yet reached levels which would suggest that the area could generate significant winter business. A similar problem is currently faced by Ely, where winter facilities exist, but successful developments to date have been limited.

Atikokan has a ski hill with a vertical drop of 280 feet and a maximum length of 2,000 feet, which is currently patronized primarily by local residents. In attempting to encourage tourists to come to Atikokan for skiing, the town is faced with significant competition, both eastwards and westwards. Thunder Bay possesses excellent skiing facilities, comprised of five major ski areas that are located between six and 20 miles from the City's central business districts. These areas all have modern uphill lift equipment, hill grooming equipment, enlarged ski chalets with snack bars, ski shops, rental equipment, professional instruction, ski clubs, and daily operation for members and visitors. Accommodations are available at 26 ski-oriented motels and hotels that are located in the downtown areas as well as on the peripheral highway system. These facilities provide 1,000 motel units with approximately 300 additional units planned for 1974.

To the west of Atikokan, there are ski areas at Kenora and Minaki. Although Atikokan may claim to have a larger ski hill than either of these resorts, Minaki has a first-class winter lodge complex that attracts a large number of visitors from Manitoba and the U.S. It can be concluded, therefore, that the Atikokan ski facility, to

compete effectively with the surrounding intervening opportunities, would need to develop a first class resort establishment to attract skiers to the town.

Economic Benefits

It can be concluded that stimulation of the tourist industry in the Atikokan area can result in a contribution to the economic base of the town. The nature and extent of this contribution depends on the extent and type of tourist-based operations that are established in the area.

The following hypothetical example assumes that, over a five- to ten-year time period, the increased demands of tourism could support the following additional establishments:

- 3 motels
- 10 lodges/vacation camps
- 10 wilderness outfitting operations
- 3 federal/provincial campgrounds.

maybe, but

Based upon the average annual revenue generated by type of tourist establishment in Ontario, discussed earlier, these additional establishments would generate a revenue of approximately $600,000 per year, and provide seasonal jobs for approximately 170 people. (In the light of earlier comments regarding the validity of the revenue statistics, the above figure is considered to be extremely conservative.)

In addition, further revenue in the town would be generated by tourist expenditures on food, gifts and other purchases. Referring back to Exhibit 19, it is seen that in 1971, 33.9% of total expenditure by U.S. tourists was for accommodation facilities. A large proportion of the $600,000 revenue computed above, would be from accommodation facilities, the exact amount depending on the proportion of revenue accounted for by outfitting establishments providing accommodation as compared with simply outfitting the tourists. Assuming a revenue of 50% spent in outfitters providing accommodation, $500,000 of the $600,000 total revenue will be expended on accommodation.

Therefore, if $500,000 represents 33.9% of total expenditure, it follows that total tourist expenditure resulting from these additional establishments would approximate to $1.5 million.

Moreover, a proportion of this total revenue would be leaked outside the Atikokan area. That which stays within the town will be multiplied by an indeterminate factor, thereby resulting in incremental income and additional job opportunities. We make no attempt to quantify the net benefit to the economic base of the town, because broad assumptions would need to be made in respect to the amount of leakage from the town and the propensity of the town's people to spend their income on local goods and services.

It is also stressed that the statistics used in the foregoing hypothetical analysis are 'averages' for Ontario, and these will vary considerably by individual establishment. Notwithstanding these comments,

the exercise does serve to illustrate in general terms the benefits that might accrue from an increase in the number of tourist-based establishments in the area. Of course, detailed feasibility studies would be required to determine the exact type and phasing of specific tourist facilities to be established in the area.

DEVELOPMENT OF THE RECREATION/ TOURISM SECTOR IN THE ATIKOKAN AREA

In determining the development phasing of the tourist industry in Atikokan, there are three main components to be considered:

- enhancement of Atikokan's appeal
- implementation of Quetico recommendations
- development of a land use plan.

Enhancement of Atikokan's Appeal

An important first step in developing the visual appeal of Atikokan is to upgrade the exteriors of the residential, commercial, and industrial establishments in the town. This could be effected by the initiation of a paint-up and fix-up scheme similar to the one adopted in Ely some years ago. Local residents and businessmen must be encouraged to take part in a voluntary scheme which could be administered by the Township. This would form part of an overall education program in which the residents are made aware of the importance of the overall exercise. If the cost of such renovations is prohibitive to many of the local residents, consideration should be given to the initiation

of provincial improvement grants to supplement, in whole, or in part, the costs of renovation. It is also important that the junction of Highway 11 and Highway 11B be developed in such a way that it will attract visitors to Atikokan. For example, establishment of an aesthetically pleasing park at this intersection would give a favourable first impression to visitors to the area. Moreover, since Highway 11B is the only access to the town, it is important that this provides a favourable impression. Unfortunately, it is along this highway that part of the town's industrial facilities have been established. This stretch of highway, particularly that lying between the OPP base and the town, is in dire need of renovations. There is also the possibility of establishing one of the open pit mining operations as a tourist attraction, and this could be promoted as a major feature of the area.

Quetico Recommendations

Because of the imbalanced utilization of Quetico Park with the majority of visitors entering from southern access points, it is recommended that the quota system suggested by the Quetico Advisory Committee be implemented as soon as practicable. Moreover, it is recommended that the entrance to the Park from the southern entry points be administered on a pre-booking basis rather than on a first-come-first-served basis. In this way, visitors who are interested in vacationing in the Park, and are unable to do so because the quota maximum has been reached, will then have time to consider the possibility of travelling

into Canada to enter Quetico Park from the northern entry points. However, to reach these northern entry points, visitors from the United States must travel through either Fort Frances or Thunder Bay, which would provide intervening opportunities.

Even if the diversion of flow from the Ely area to the Atikokan area is not significant in the short term, it is clear that in the medium term there will be an increased demand for entry into Quetico Park from the northern side. It is therefore recommended that the establishment of more northern entry points, as recommended by the Quetico Advisory Committee, be implemented.

Conduct Feasibility Studies for a Recreational Complex

The Ontario TORPS Committee conducted a preliminary study in 1973 to identify potential locations for the development of an integrated recreational complex. The study analyzed the physical characteristics of Northwestern Ontario to determine potential sites for an integrated year-round, recreational complex.

Because of the wilderness beauty of the Quetico area, and given the length of the summer season, the Quetico area was one of the locations identified for further study. The four-season recreational complex would provide family amenities such as swimming pools, tennis courts, restaurants, in addition to the primary attraction, which is the natural wilderness beauty of the area.

Our study suggests that this concept has merit and is consistent with our recommendations that the tourist/recreation potential of the Quetico amenity be maximized. We, therefore, recommend that these detailed feasibility studies be undertaken as soon as possible.

Development of a Land Use Plan

As discussed earlier, development of a land use plan is imperative to the future utilization of the recreation resources of the area. It could be argued that such a plan would be developed and formulated when a decision has been made to build or not to build a road from Atikokan to Ignace, and when the route that such a road would take was finalized. However, from an economic standpoint, development of a viable tourist industry north of Atikokan is one of the main justifications for the road. Therefore, the need for a road and its route should form an integral part of the overall land use plan, rather than the plan being developed in isolation.

Timing and Phasing

Considering the development of the whole area from a tourist standpoint, it must be decided how much can be done and how fast. The efficiency of a tourist industry depends on its ability to attract tourists to its area, and then provide them with accommodation, things to see, things to do, and things to buy. The first priority is therefore to enhance Atikokan's appeal to the tourists.

While new entry points to Quetico Park from the north can be opened up in one season, it is likely that implementation of a quota system will require several years to attain maximum effectiveness. Therefore, if Ontario, and Atikokan, are to benefit from the Quetico Committee recommendations, it is important that these recommendations be implemented with all possible speed.

While it is clearly important to formulate a land use plan, it is considered that implementation of detailed aspects of the plan is not a top priority. Essentially, the major problem facing Atikokan at present is not the lack of tourism in the area, but rather the lack of economic benefit gained by the town from tourism. The major priority is therefore to maximize the dollar expenditure of tourists who currently visit the area. When this is achieved, it would then be appropriate to consider the development of hitherto inaccessible areas so that the entire area can support a greater level of tourist activity. Such planned development would assist in ensuring that a surplus of tourist facilities does not occur. In addition, strip development would be avoided and the area could be developed to its maximum potential.

also lack!!

SUMMARY

1. Atikokan can benefit economically from stimulation of the tourist industry, although it is likely that it will take several years for these benefits to materialize.

2. Although tourism will generate income in the area, it is unlikely to generate significant employment opportunities. At best, it will provide full-time jobs for female workers providing opportunities which do not exist at present for these members of the labour force. High school students would also obtain employment.

3. Development of the tourist industry will not, in itself, offset the negative economic impact caused by the Caland mine closure.

III - MINING INDUSTRY DEVELOPMENT POTENTIAL

At the present time the Town of Atikokan is oriented primarily around the mining sector. We have conducted discussions with a number of knowledgeable individuals in the public and private sectors in an attempt to determine planned mineral development in the area and the potential for mineral development in the Atikokan area. The following sections describe the mineral potential of the area and discuss the possibility of establishing another mine. For those knowledgeable with the mining industry, it is well known that the industry suffers from a high degree of uncertainty and that the finding of a viable ore body is a very risky proposition. Therefore, the comments that are presented below must be taken within the context of the uncertainties associated with mineral exploration and development activity. For example, a similar report discussing the economic development of the Timmins area in the early 1960's might have come to conclusions similar to those that we have drawn for the Atikokan area. At that time, there was no way of knowing that the enormous discoveries in the Timmins area would transform the community over the following decade.

PLANNED INVESTMENT

We have conducted discussions with those companies presently mining in the Atikokan area and with selected companies that have undertaken significant exploration activity in the Atikokan region.

At this time, there are no announced plans to develop facilities within a 50-mile radius of the Town of Atikokan. However, there is the possible exception that certain now defunct gold mines may be reactivated due to the present high price of gold on international markets.

Our discussion with one company indicated that the establishment of these gold mines would be on a very flexible basis. That is, the companies (if they did decide to undertake these operations) would utilize portable mining and concentrating facilities. These would be capable of being moved to another area, with minimum economic disclocation, when either the cost of producing the gold rose too high, and/or the price of gold on international markets fell to a point where production was no longer viable at that particular site. At this time, these planned investments in gold mining activity are at the tentative stage and it is difficult to assess what employment, if any, might be generated from these activities.

EXPLORATION ACTIVITY

Discussions with two companies actively exploring in the Atikokan area have indicated that the area is of interest with respect to the geological potential for finding base metal mineral deposits. Both of these companies indicated that they have had a continuing exploration program in the area and plan to do further exploration work in the years ahead.

The companies interviewed indicated that although the Atikokan area is a region of interesting mineral potential possibilities, other areas in the province warrant equal, or higher, priority in their exploration and development programs. Essentially, these companies expressed interest in the area, had performed exploration work in the past, will continue to do exploration work in the future, and consider the region of some importance in their overall mineral exploration program.

It appears that much of the greenstone area within a 50-mile radius of Atikokan has been examined. However, the exploration activity in these areas has taken place over a number of years. Thus, the type of exploration that has occurred was dependent upon the technology available at the time. It appears that there has not been a completely systematic evaluation of the territory utilizing all of the latest techniques and tools available for exploration activity.

Staked Claims in the Atikokan Area

The Department of Natural Resources has provided us with a number of maps of the Atikokan area which indicate that in selected locations, extensive claiming has taken place. An analysis of these maps indicates that much of this claim-staking activity has resulted in patent claims in the area. Under a patent claim, the person holding the claim retains the right to both the surface as well as the underground, potential of the claim. Discussions with a senior executive of one of the mining

EXHIBIT 26

MINING ACTIVITY IN THE KENORA AND FORT FRANCES DIVISIONS*

Year	Mining Claims Recorded	Mining Claims Cancelled	Applications for Lease	DAYS OF ASSESSMENT WORK								Extension of Time on Mining Claims
				Total	Manual Labour	Diamond-Drilling	Land Surveys	Bull-dozer	Geo-physical Surveys	Geo-logical Surveys	Power Equipment	
1954	3,125	1,665	N/A	28,488	1,437	24,988	57	385	1,080	0	540	555
1955	6,567	1,477	28	34,581	3,935	22,453	68	234	1,199	5,912	780	1,767
1956	3,834	4,900	35	223,026	3,126	201,509	4,240	0	9,954	1,713	2,484	2,469
1957	1,680	4,772	156	83,831	2,554	46,661	3,080	0	19,485	9,740	2,311	1,401
1958	1,891	3,266	113	31,497	534	18,017	2,080	0	9,000	928	938	822
1959	1,568	2,327	43	25,307	1,878	19,133	2,080	0	1,239	461	516	1,062
1960	1,564	1,987	118	16,275	772	13,667	960	0	276	0	600	677
1961	1,160	1,489	56	34,555	1,329	25,062	640	0	1,572	3,240	2,712	657
1962	1,300	1,500	12	19,579	185	14,568	960	0	3,345	361	160	485
1963	1,046	1,290	24	11,187	721	5,302	600	0	1,585	1,728	1,251	631
1964	786	1,158	2	14,032	1,157	11,342	200	0	440	0	885	336
1965	2,937	694	4	17,183	1,614	14,017	880	0	0	0	672	458
1966	3,042	1,562	29	38,995	1,799	22,404	120	0	11,107	0	3,565	1,213
1967	2,355	3,246	20	52,713	885	30,434	1,000	0	18,029	818	1,549	872
1968	2,453	2,153	11	39,266	635	28,670	0	0	8,904	0	1,057	567
1969	2,364	2,802	17	43,646	494	18,455	440	0	16,527	5,782	1,660	932
1970	4,904	1,557	16	64,517	732	30,747	760	0	26,389	2,180	3,719	728
1971	982	4,641	0	75,506	638	51,615	0	0	22,040	360	853	763
1972	1,398	2,053	0	32,837	833	19,781	0	941	9,964	800	518	605

* In 1968 the Fort Frances and Kenora Divisions were amalgamated into one Division, the Kenora Division.

SOURCES: "Annual Review of the Mineral Industry", 1954-1972, Ministry of Natural Resources.

companies actively exploring in the area, indicated that the extensive amount of claiming in the region has been of some deterrent to further explorations in the Atikokan area. He suggested that, beyond a fixed time, the underground (mineral) rights to patent claims should become available to general usage such that the mineral potential of the area can be maximized.

It was not within our terms of reference to explore this factor in greater depth. However, it is our understanding that a number of highly profitable mines have been found on patent land. Therefore, while the number of claims in the area may be a deterrent to expanded exploration activity, it is difficult to quantify exactly the scope and extent of the deterrent. We recommend that further policy analysis be undertaken to determine the impact on exploration of claims in Atikokan, as well as other areas, to accurately assess the negative impact, if any, of mining claims on exploration and development activities.

Exploration Activity in the Kenora Division

Exhibit 26, opposite, indicates mining activity in the Kenora District over the period 1954-1972. The data for the Kenora Division prior to the year 1968 is an amalgamation of the data presented for the then separate Fort Frances and Kenora Divisions. Based upon the exhibit, it appears that while the level of mining claims recorded has been variable, the level of mining claims recording activity has remained relatively constant over the period 1954 - 1972. In 1954,

of the total mining claims recorded in the province the combined Divisions of Kenora and Fort Frances accounted for seven per cent. In 1971, the Kenora and Fort Frances Divisions accounted for six per cent of the total mining claims recorded in the province. Similarly, the percentage of mining claims cancelled in the Kenora Division has been consistent over the time period 1954-1972.

This consistency of mining claims recording activity, and mining claims cancellation activity, appears to confirm that the general Kenora Division has been of consistent interest to mineral exploration companies since the early 1950's. Atikokan is an important part of the Kenora Division, and the mineral potential history of the area has encouraged companies to continue exploration activity in the belief that eventual payback of exploration activity may well occur.

THE HUB CITY CONCEPT

The hub city concept suggests that cities should not necessarily be established at every mine site, as it becomes uneconomic to provide the full range of social services that must be made available to each resident. Thus, the provision of adequate medical services, the complete range of schooling, as well as the recreational activities, cannot be provided in every population centre that surrounds a given mineral deposit. Under the hub city approach, a city of sufficient size would be established at a focal point such that the mine workers would be able to

commute to their place of employment. Given the size of a hub city, it would then be possible for government to provide an adequate range of social services for the citizens and residents of that city. In addition, because the hub city would not be dependent upon one single mineral deposit, the economic and social life of the area would be enhanced and a greater stability would be imparted to the entire city.

With respect to Atikokan, we have examined the potential of Atikokan becoming a hub city in Northwestern Ontario. At the present time, there appear to be few, if any, residents of the town of Atikokan who commute to the International Nickel facility at Shebandowan, 75 miles away. While this situation may change as the Caland closing becomes more imminent, there does not now appear to be a major impetus to commuting such a distance. Discussions with the President of Steep Rock Mines indicated that some workers might commute from Atikokan to the proposed iron mining facility at Lake St. Joseph. However, Lake St. Joseph is 250 miles from Atikokan. It would, therefore, be necessary for the residents of Atikokan to work away from home during a standard work week. Discussions with selected employees in the Caland facility indicated that while some might be interested in undertaking this commuting activity from Atikokan, many would not.

Most new mining developments in the region are occurring to the north of Ignace, and it would, therefore, appear that Ignace is more likely to become the hub city for many of the surrounding mining

activities. A road from Atikokan to Ignace would enable some Atikokan residents to commute through Ignace to some of the developments to the north, such as the new Falconbridge and Umex operations. However, the journey to work would be lengthened by the approximately 40 - 50 miles from Atikokan to Ignace. This additional journey to work would tend to diminish the numbers of workers who would be prepared to commute such long distances on a daily basis.

MINERAL DEVELOPMENT POTENTIAL

The general area around Atikokan is considered one of high mineral potential. Extensive exploration has taken place in the area and will continue to take place over the coming years. However, based upon our discussions with officials in the public and private sectors, there do not appear to be any plans to develop new mines in a 50-mile radius of Atikokan at this time. While a new mineral deposit may be found at any time, it must be borne in mind that there are certain lags in start-up time before a mine is brought into production. If an economically viable mineral deposit were to be found today, it might take anywhere from two to four years of extensive pre-production activity before the actual mining of the deposit were to occur.

Based on the foregoing, we have concluded that it is unlikely that a new mine will be in production in the Atikokan area at the time of the initial closure of the Caland facility in 1976. The medium potential beyond 1976 appears to be more promising, particularly if

world prices of minerals continue to increase. As world mineral prices rise, the economics of a given mineral deposit become better. However, while the potential may appear to be good, there can be no definitive planning with respect to a given level of mineral activity in the year, say, 1978.

In view of the low probability of a new mine, or mines, being established in the area in the next five years, the government, and the private sector in Atikokan, must be prepared to look at other development opportunities to provide sufficient levels of employment for the Caland labour force that will become redundant over the period 1976-1978. The people of Atikokan and the government of the Province of Ontario must plan to develop alternative employment opportunities for the labour force that will become redundant. If an additional mineral deposit is found during the next three to five years, then the employment that would be generated from this development must be considered as an additional benefit, which could not be planned, and which will create additional job opportunities to those that might be created from other activities undertaken by the local residents and by the Province of Ontario.

RECOMMENDATIONS

The Atikokan area has high mineral potential and this potential should be maximized to the greatest extent possible. The following recommendations are intended to assist in expanding the mineral economic

base to provide the town of Atikokan with improved medium-term employment opportunities in the mining sector.

The Mineral Exploration Assistance Program

The Province of Ontario, in 1971, established a Mineral Exploration Assistance Program to assist designated areas in attracting exploration activity. The program is designed to assist companies in undertaking exploration activity in specific areas that are experiencing economic dislocation due to mine closures. As Atikokan will experience these difficulties in 1976, we suggest that the town be designated as an area which will qualify under the assistance program.

Our discussions with certain mining companies have indicated that they take advantage of these programs. For example, one of the companies indicated that if they planned on spending, say, $75,000 for exploration activity in the Atikokan area, and Atikokan were designated under the assistance program, then they would increase their expenditures in the area by the amount of the assistance. This increase in exploration activity may increase the likelihood of an economic ore body being discovered, thereby assisting in the development of the mineral potential of the area.

Furthermore, an increase in exploration activity in the area will have a certain, albeit marginal, impact on income and employment levels in the Atikokan area. Exploration activity itself generates

both jobs and the need for supplies and equipment. It is anticipated that at least some of the necessary men and materials would be obtained from the town of Atikokan. However, the amount of usage of men and materials is anticipated to be small and the beneficial impact of the program is not expected to be extensive.

Designation of Atikokan under Federal/Provincial Cost-Sharing Programs

Interviews were conducted with federal government officials in the Department of Regional Economic Expansion and the Department of Energy, Mines and Resources, to discuss those shared cost programs, between the federal and provincial government, that may be applicable to the Atikokan area.

One of the programs provides for the undertaking of extensive surveying, mapping and geological exploratory activity in specific areas, and it was through a program of this type that the substantial potash discoveries were made in the southern part of New Brunswick.

We recommend that the Province of Ontario consider entering into shared cost programs, with various federal departments. One program of merit would be the blanket type of mapping and exploration activity that has been conducted in other provinces. Given the high mineral potential of the greenstone areas in the Atikokan region, such a program should increase the likelihood of an economic ore body being discovered. In the meantime, there is a side benefit in that the increased exploration activity resulting from such a program will

impact to some degree upon the Atikokan community in terms of the purchase of goods and services in Atikokan and the use of some local manpower in the programs.

Potential exists also for the establishment of other types of shared cost arrangements. Discussions with officials in the Department of Regional Economic Expansion have indicated that a number of studies are under way that may be of interest to the Atikokan area. Specifically, one official is currently examining possible DREE programs that may be implemented to provide assistance for communities dependent upon a single resource. Depending on the outcome of such studies as this, the provincial government should be prepared to enter into joint programs with DREE in order to stimulate economic activity in Atikokan.

Mining Research

The Department of Energy, Mines and Resources has confirmed that funding exists for conducting mining research in Canada. We recommend that the provincial government attempt to obtain assistance from the Department of Energy, Mines and Resources and/or other federal departments and agencies with a view to conducting underground mining research in Atikokan. Evidently, underground mining activities in the Steep Rock facility have not been successful, because the composition and hardness of the ground in the area creates problems in respect to tunnel support.

Given that mining research funding is available, we recommend that research be undertaken at the existing facility in order to develop methods and techniques such that the underground mining envisaged for the area will become technologically and economically feasible. In addition, the technology and methods developed may be applicable in other areas of Canada and abroad.

Mining Training Centres

It is conceivable that the open pit at the Steep Rock site could be utilized as a training centre for prospective open pit and, perhaps, underground miners. It may be possible to coordinate this training function with either one of the Northern Ontario universities and/or the Quetico Training Centre which is located to the east of Atikokan.

The use of the facility as a training centre would create a certain number of jobs and would also add income to the community as it would be necessary for the instructors to live in the Atikokan area and for them to purchase a certain amount of goods and services from the local community.

In itself the establishment of a training facility will not create a substantial amount of employment. Nevertheless, it may be possible to utilize the skill and experience of a number of trained Caland employees who would otherwise be unemployed. During our discussion

with the Caland labour force, a number of the older employees indicated a desire to remain in Atikokan, and some would not be willing to move in order to obtain stable employment. The utilization of this skill resource in an Atikokan training centre would represent a desirable use of these skilled workers.

IV - FOREST-BASED INDUSTRY DEVELOPMENT POTENTIAL

PLANNED INVESTMENT IN ATIKOKAN

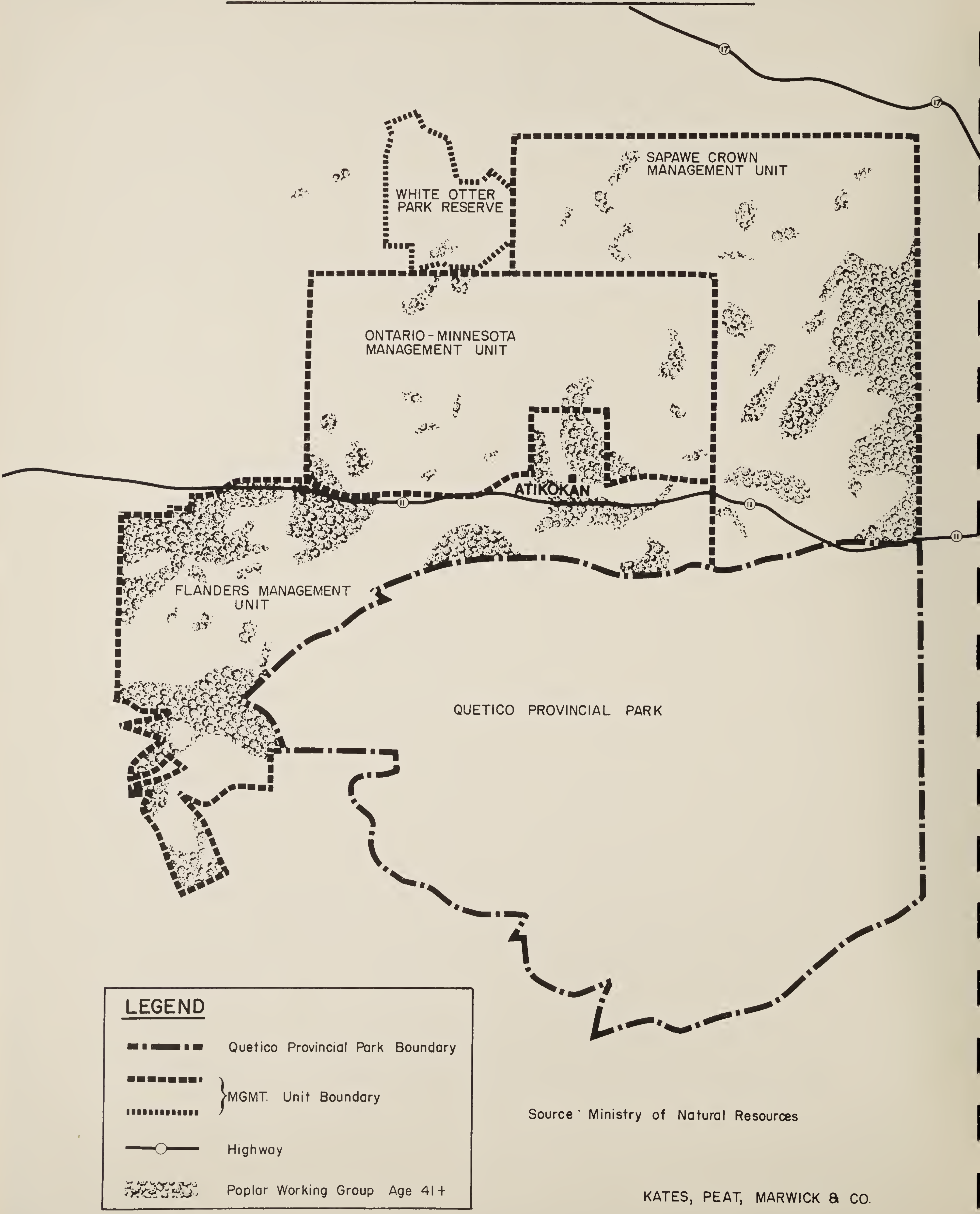
Discussions with major pulp and paper manufacturers located in Northwestern Ontario have indicated that there is no likelihood of these companies investing in the Atikokan area at the present time. Three major companies, Great Lakes Paper Co. Ltd., Ontario-Minnesota Pulp and Paper Co. Ltd., and Dryden Paper Co. Ltd., state that the location of Atikokan is too far from their current wood processing operations to consider establishment of a plant there.

Great Lakes Paper Co. Ltd. operates from a central complex located in Thunder Bay. The centralized aspect of this complex minimizes the handling of the logs that are processed in the various facilities. For example, the logs are fed into one area where they are then sorted according to their suitability for pulp making, stud making, or other types of processing. If the various facilities were dispersed over a wide area, the amount of cross-hauling of logs from one facility to another could be substantial. Moreover, Great Lakes Paper Co.'s current location is ideal for distribution purposes. Situated on the edge of Lake Superior, the company has facilities for shipping lumber virtually all over the world, and has immediate access to the main highways that run east, west, and south. Railway spurs run directly into their central complex.

Similar arguments are put forward by Ontario-Minnesota and Dryden Paper Co., both of whom point out that Atikokan is located off

EXHIBIT 28

LOCATION OF MERCHANTABLE POPLAR IN THE ATIKOKAN DISTRICT - 1973



17
SAPAWE CROWN MANAGEMENT UNIT
WHITE OTTER PARK RESERVE
ONTARIO - MINNESOTA MANAGEMENT UNIT
ATIKOKAN
11
FLANDERS MANAGEMENT UNIT
QUETICO PROVINCIAL PARK
LEGEND
Quetico Provincial Park Boundary
MGMT. Unit Boundary
Highway
Poplar Working Group Age 41+

Source: Ministry of Natural Resources

KATES, PEAT, MARWICK & CO.

EXHIBIT 27

ANNUAL ALLOWABLE CUT VERSUS ACTUAL CUT

ATIKOKAN DISTRICT - NET MERCHANTABLE CORDS

	White Pine	Red Pine	Jack Pine	Spruce	Balsam	Other Conifers	Poplar	White Birch	Other Hd. Woods
Flanders Mgmt. Unit (Crown)									
Net merch. annual allowable cut in cords	2,695	698	53,905	13,195	945	535	60,600	4,790	127
Total Cut 1972-73	1,262	116	46,251	12,318	14	-	2,900	-	-
Difference	+1,433	+582	+7,654	+877	+931	+535	+59,700	+4,790	+127
O + M Mgmt. Unit (Seine River Eastern Unit)									
Net merch. annual allowable cut in cords	4,050	Red Pine Combined With White Pine	20,682	15,120	1,674	-	14,148	-	-
Total Cut in 1972-73	-		34,585	7,769	-	-	-	-	-
Difference	+4,050	-	-13,903	+7,351	+1,674	-	+14,148	-	-
Sapawe Mgmt. Unit (Crown)									
Net merch. annual allowable cut in cords	2,209	342	51,749	17,681	4,465	1,053	50,298	4,694	6
Total Cut 1972-1973	-	-	45,790	7,591	-	-	-	-	-
Difference	+2,209	+342	+5,959	+7,591	+4,465	+1,053	+50,298	+4,694	+6
Net merch. annual allowable cut for District (Cords)	8,954	1,040	126,336	45,996	7,804	1,588	125,046	9,484	133
Total District cut 1972-73	1,262	116	126,626	27,678	14	-	2,900	-	-
Difference	+7,692	+924	+290	+18,318	+7,070	+1,588	+122,146	+9,484	+133

SOURCE: Ministry of Natural Resources

the limits of their licensed areas. Apart from specific economic arguments, these companies point out that Atikokan has no specific unique locational characteristic that would incite them to consider locating a plant there.

WOODSTANDS AND UTILIZATION IN THE AREA

Exhibit 27, opposite, shows the timber availability in the Atikokan district, and compares the annual allowable cut with actual cut, by species, for the year 1972 to 1973 in each management unit. This table shows that the allowable cut of the predominant coniferous species, jack pine, is now being harvested to the full productive capacity of each unit. It is expected that the allowable cut for spruce on each unit will be fully harvested during the current cutting year 1973 to 1974.

The major hardwood species, poplar, is not being utilized and the Ministry of Natural Resources states that most of the total allowable cut could be made available. The pulp and paper mill at Fort Frances can obtain its poplar requirement close to the mill, and has indicated scant interest in the available supply from the Atikokan district. Moreover, the long hauling distance to the poplar using industries in Thunder Bay almost precludes, on an economic basis, the purchase of poplar from the Atikokan district. The situation in respect to each management unit in the district, shown in Exhibit 28, opposite, is summarized by the Ministry of Natural Resources as follows:

Flanders Crown Management Unit

A volume agreement in this unit, with the Ontario-Minnesota Pulp and Paper Co. Ltd., assures the company a supply of 350,000 cords of jack pine, spruce and balsam for the five year period up to March 31, 1976. The wood on this unit is cut by 13 established licensees who contract with Ontario-Minnesota for the jack pine, spruce and balsam up to the volume agreement. These species are therefore committed and not available to other users. However, other species are not committed and the poplar, which is the major hardwood species on the unit, would be available to other users.

The allowable annual cut for poplar is 60,000 cords. It is estimated that approximately 200,000 to 300,000 cords are reasonably accessible from the present road systems without major expenditures on road construction. All of the established licensees in the units are in a position to produce various amounts of poplar that could be integrated with their current operations if markets were available.

Ontario-Minnesota Pulp & Paper Management Unit

This is a company management unit and Ontario-Minnesota has the right to cut all species as stated in the license. During the current operating plan up until 1978, the company will not be cutting poplar. Because of the availability of this species close to the mill, it is not likely that they will use poplar from more distant areas in the foreseeable future, and it is possible that this source of poplar could be made available to

other users. Much of the available poplar is accessible from the current road system in the unit and would not involve major expenses for road building. The calculated annual allowable cut for poplar from the unit is 14,148 net merchantable cords.

Sapawe Crown Management Unit

This is a newly formed crown management unit. It includes the old Mathieu Working Circle Number 2 plus most of the area to the north and east within the Atikokan district. A volume agreement to supply the sawmill at Sapawe is currently in the process of being formulated. It is expected that 70,000 cords annually of coniferous species will be agreed upon, and company officials are planning on cutting poplar sawlogs in 1974 on a trial basis. At this time it is difficult to predict how much poplar would be available for other uses on this unit, but it is estimated that the company would probably utilize no more than 50% of the allowable cut. Therefore, of the estimated 50,000 cords of allowable annual cut in the unit, 25,000 cords may be available for other users.

It is estimated therefore, that there may be approximately 100,000 cords of available poplar on an annual basis from the Atikokan district. However, the majority of the poplar in the district is not of high quality, and it is estimated that only about 15 per cent of the total volume would be suitable for veneer or sawlogs.

It should be stressed that the foregoing analysis of the poplar situation in the Atikokan district is based on an initial assessment made by the Ministry of Natural Resources. If markets were identified for these poplar stands, a special inventory of quality and size of material available would have to be conducted before the area could be harvested on a commercial basis.

POTENTIAL USES FOR POPLAR

Poplar is currently used in North America for a variety of purposes, including:

- particleboard
- plywood
- waferboard
- pulp
- snow fencing
- pallets
- furniture and components
- hardboard.

Particleboard and Waferboard

Poplar is used extensively in Canada for the production of both particleboard and waferboard, and in fact two new plants are being established in Northwest Ontario in 1974. McMillan Bloedel is establishing a waferboard plant in Thunder Bay, in 1974, at a capital

cost of $9.4 million. The plant will employ 140 people on a three shift basis and use 94,000 cords of poplar and birch in the production of 100 million square feet of three-eighths of an inch thick waferboard, per annum. Great Lakes Paper will also be bringing on stream the combined particleboard and waferboard plant, in 1974, at a cost of $10 million. The plant will employ approximately 100 people in the output of either 50 million square feet of five-eighths of an inch particleboard or 150 million square feet of waferboard. The mill is designed to produce either or both of these products depending upon the needs of the market at any point in time.

Waferboard is produced by chipping logs into wafers, which are then subsequently dried, graded and bonded, by compression and heat, into board form. Log quality is important in that the greater the degree of rot, the greater the production costs to obtain useable wafer chips.

Particleboard is generally produced from mill waste, although a few plants in North America grind down logs to provide the necessary supplies of raw material. This latter process requires capital equipment that plants using mill waste as a raw material do not need. One industry source estimated that production costs of plants producing particleboard by grinding down logs were 25 per cent higher than those of a plant utilizing mill waste.

Plywood

Poplar is used extensively in the production of plywood. When

utilized in this manner, the sizes and quality of the poplar stands available become critical. The logs must be of sufficient diameter, eight to nine inches minimum, to permit them to be peeled economically, and of quality that will give a suitable grade of veneer. It is not feasible to peel veneer from badly rotted logs.

Pulp

In North America poplar pulp is not used in itself for processing into an end product. Rather it is mixed with softwood pulp to produce a variety of types and grades of paper. For this reason poplar pulp mills in North America tend to form part of a larger pulp making complex. Because of various technical problems associated with the transportation of poplar pulp, it is not considered desirable, nor economically feasible, to establish a poplar pulp making facility in an area that is remote from a softwood pulp mill facility.

Moreover, because of the economics of the pulp making process, it is considered that the minimum sized operation would produce 200 to 300 tons of pulp. A pulp mill, therefore, is considered a large consumer of wood.

Furniture and Components

Poplar is commonly used in the production of furniture components, and it is used to a lesser degree in the production of finished furniture. In the components industry it is used for such purposes as frames for upholstered furniture, cross-members in a variety of cabinets

and a multiplicity of other non-visual components.

Its use as finished furniture is illustrated by a small manufacturer located in Kenora that produces a range of sun deck type furniture in which poplar logs are used in their natural form to provide the arms, legs and backs of lounge chairs. This manufacturer employs a total of eight people in his operation and produces a range of products that, because of their visual appeal, would be sold to a restricted market. However, because the costs of obtaining poplar logs of suitable size and quality are increasing, and because of the restricted aesthetic appeal of the product when manufactured from poplar, the company has recently begun using pine in increasing quantities.

Other Products

Poplar is used in a variety of other end products. These would include pallets, snow fences, cheese tubs, surveyor stakes, and others.

DEVELOPMENT OPTIONS

In looking at the potential uses of the poplar stands that exist in the Atikokan district, it is important to consider both the quantity and quality of the poplar stands available. The potential for a poplar pulp mill appears remote. On the one hand, it does not appear that a sufficient quantity of wood is available from the district to support such a mill, although it is conceivable that supplies of poplar could be obtained from outside the Atikokan district, and on the other hand, it does not appear that it is feasible to establish a poplar pulp mill in isolation.

Similarily, it is doubtful whether a sufficient quantity of poplar is available in the desired size, and the required quality, to support the establishment of a plywood mill, if the Ministry of Natural Resources estimates, that only 15 per cent of the 100,000 cords of poplar available in the Atikokan district would be suitable for saw-logs or veneers, are accurate. However, a more detailed analysis would need to be made before the possibility of a plywood plant is discounted.

Assessment of the feasibility of a particleboard plant would show whether the plant could operate economically by grinding down logs to provide raw material, or whether supplies of mill waste are required. If supplies of mill waste are required, consideration would have to be given to the availability of the raw material from the sawmill at Sapawe, and other possible sources at Thunder Bay and Fort Frances. Conversely, if grinding down of logs is an economically viable proposition, the establishment of a particleboard mill in Atikokan could be supported by the poplar availability in the area.

Furniture component manufacturers are generally located close to their customers, i.e. furniture manufacturing plants. Establishment of such an operation in Atikokan is therefore, questionable. There is potential for the establishment of a furniture manufacturer. However, the company in Kenora stated that the rustic appearance of poplar furniture appeals to only a limited market segment. It is unlikely, therefore, that such a company could reach the level of sales required to support a large workforce.

EXHIBIT 29

EMPLOYMENT LEVELS IN A SELECTION OF WOOD PROCESSING FACILITIES IN CANADA - 1970

Type of facility	No. of facilities by numbers employed						
	0 - 4	5 - 14	15 - 49	50 - 99	100 - 199	200 - 499	500 +
Particleboard	-	-	3	3	3	-	-
Veneer/Plywood	----12-----		19	23	17	-----19------	
Pulp and Paper(i)	-	-	5	13	17	46	38
Sash, door and other millwork	397	225	160	39	-	12	-
Wooden crates	61	57	28	8	-	8	-
Furniture and fixtures	1,165	458	358	130	74	21	3
Sawmills and planning mills	779	401	354	114	81	38	4

Source: Statistic Canada

(i) There are 18 establishments employing in excess of 1,000 workers.

There is little published information available in respect to snow fencing or pallets, and since supplies of poplar are available in the Atikokan district to produce these components, it must be considered that the establishment of a manufacturing facility in this area is feasible.

Evaluating the Options

The foregoing represents an outline of the potential that exists in the Atikokan district with respect to the utilization of the poplar stands. Clearly, a number of steps must be taken before a decision can be made as to how best the poplar stands in the area can be utilized.

Firstly, the exact quantity of poplar available in the district needs to be established, as well as that available from outside the district, and an overall assessment should be made of the quality of the strands to determine its suitability for subsequent end uses. Secondly, in deciding how the wood stands can best be utilized, it is important to ensure that:

1. The poplar should be used in a manner which will maximize the utilization of the whole tree.
2. Viable, labour intensive, industries should be encouraged to use the resource. Exhibit 29, opposite, indicates employment levels in selected wood processing industries in Canada.
3. Each potential development option should be preceded by a feasibility study.

At this point in time there appears to be a substantial demand for all types of wood products, and the future markets for such products as plywood, particleboard and waferboard appear promising. However, a

number of projects are currently underway in Canada to increase capacity of these products, and a careful evaluation of the future supply and demand situation is therefore crucial.

Current Interests in the Area

Currently, there are two U.S. companies that are considering the establishment of wood processing facilities in Atikokan. It is understood that both of these companies are conducting discussions with the Ministry of Natural Resources.

One company is considering the establishment of a snow fence manufacturing operation in Atikokan. The operation would require 15,000 cords of poplar annually and create employment opportunities for 80 workers on a two shift basis.

The other company is a large American pulp and paper manufacturer. The company is tentatively discussing the feasibility of establishing a $50 million poplar pulp mill in Atikokan, which would utilize 250,000 cords of wood per year and provide employment opportunities for upwards of 100 people. Negotiations are at a very early stage and it is understood that the company will be sending representatives to Toronto in the last week of November to discuss, in more detail, the poplar availability situation in Atikokan.

RECOMMENDATIONS

If no new wood facilities are established in the Atikokan

area in the medium term, potential job opportunities in the forestry industry in the area will be limited. If residents of Atikokan are prepared to commute a distance of 40 to 50 miles there are potential opportunities in the Great Lakes woodlands operations to the east and in the Ontario Minnesota operations to the west. These two operations might provide somewhere in the region of between 50 and 100 jobs, of both a skilled and unskilled nature.

On the assumption that 100,000 cords of poplar, of desired quality, is available each year, in the district, the number of job opportunities created by the establishment of a processing facility will depend upon the type of facility that is located there. For example, if a waferboard mill with an output of 100 million square feet per year were to be established, similar to the McMillan Bloedel operation in Thunder Bay, 140 direct jobs would be created plus approximately another 40 or 50 jobs in the woodlands operations. Since such a mill would require 94,000 cords of wood per year, this would effectively exhaust the available annual supply.

If, on the other hand, a snow fence manufacturer were to establish a facility in the area, the operation would require only 15,000 cords per annum while providing job opportunities for 80 people. This would leave approximately 85,000 cords available which could be used in a particleboard or waferboard plant smaller than that outlined earlier.

Careful evaluation of the permutations of options open to the utilization of the wood stands would be required before a clear assessment could be made of the job creating potential of the poplar in the area. However, it could be estimated that full utilization of the resource might create somewhere in the region of 200 jobs.

Consideration must also be given to the possibility of obtaining further supplies of wood from outside the Atikokan district. If supplies could be obtained from other licensed areas, the type or types of facilities that might be located in Atikokan would be less restricted by the local availability of wood.

Given present markets for wood products, the development opportunities in the forestry sector appear to be promising for Atikokan.

V - MANUFACTURING INDUSTRY DEVELOPMENT POTENTIAL

PLANNED INVESTMENT

During the course of this study, field trips were taken to Northwestern Ontario, specifically Atikokan, Thunder Bay and Fort Frances. A number of interviews were conducted with officials of the Northern Ontario Development Corporation, the Ministry of Natural Resources and the Ministry of Industry and Tourism. In addition, discussions were held with members of the Atikokan Economic Development Committee and local businessmen.

Based upon these discussions there do not appear to be, at this time, any definite plans for major capital expenditures with respect to secondary manufacturing industry. This does not include the potential developments in the forestry sector which are discussed in the preceding section.

During our meetings with the local canoe and paddle manufacturers, the likelihood of expansion of their respective facilities was discussed. Both businessmen indicated that a sufficient market exists to permit an expansion of their plant facilities. However, a number of potential difficulties exist that may deter growth. A major problem is lack of sufficient financial strength.

Growth of these existing manufacturing industries should provide increased job opportunities. However, given the initial size of

these firms, and given the incremental growth that is anticipated for them, it is unlikely that either of these firms will be able to expand employment significantly over the next few years relative to expected mining employment losses.

THE LOCATIONAL CHARACTERISTICS OF ATIKOKAN

The Town of Atikokan has developed a substantial social service infrastructure. With respect to the attraction of secondary manufacturing industries, there are a number of locational characteristics which must be taken into consideration. For example, a listing of locational requirements for industry would include some of the following factors:

- labour supply
- access to markets
- transportation
- availability of materials and intermediate goods
- availability of water and sewer capacity
- availability of industrial land
- inter-industry linkages for ease of communication with suppliers and customers.

The Town of Atikokan is favourably located with respect to a number of the above-mentioned locational characteristics. However, these favourable locational characteristics may not, in themselves,

provide a sufficient force of attraction to bring footloose* secondary manufacturing industries into the Atikokan area.

Favourable
Locational Characteristics

Atikokan has and will have a good supply of trained labour. The labour force available from the Caland facility will cover the complete ranges of skilled and unskilled labour, and will be in varying age groups. This supply of labour will become available over the course of the next five years as the Caland facility begins its shutdown.

Some concern has been expressed that the labour force which will become redundant may not be adequately trained, or suitably flexible, to take occupations in other industries. However, those workers currently employed in the pelletizing plant are essentially unskilled labourers, who could function in any secondary manufacturing industry. Similarly, the semi-skilled equipment operators, and the skilled tradesmen (such as electricians), are transferable from one industrial sector to another. The fact that the Caland facility is open pit mining appears to be a positive factor in aiding in the substitutability of the employees from one industry to another. Open-pit miners appear to be different in their job mobility patterns than are underground miners. Nonetheless, there may be some requirements for the re-training of the workers, and this is discussed in a later part of this section and in Appendix A.

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* By the term "footloose" we mean industries which are free to locate at a wide variety of locations since they are not particularly sensitive to transportation costs for raw materials, components or finished products.

Atikokan is favourably situated with respect to highway and rail access. The town is well serviced by rail,which goes immediately through the town, and also by Highway 11 which connects Fort Frances with Thunder Bay.

The Town of Atikokan has a substantial amount of industrial land available for servicing. This land could be made available for development with good access to both the highway and to the rail facilities.

Atikokan has sufficient water and sewer capacity to accommodate the development of new secondary manufacturing industry.

Finally, the location of Atikokan, north of the Quetico Park area, may be important in the development of a handicraft industry based upon the Quetico name. That is, once tourism has reached a sufficient level in the Canadian part of Quetico Park, it may be possible to develop certain local handicraft industries preparing products with a Quetico label. It should also be noted that the possible use of the Quetico trademark may be made available to such secondary manufactured products as canoes, paddles, etc. The use of this trademark, in conjunction with an expanded visitorship to Quetico via the Atikokan area, might provide a substantial stimulus to the local manufacturing industry. However, this development could only occur with a more substantial inflow of tourists to Quetico Park through the northern access points near Atikokan.

Unfavourable Locational Characteristics

There are a number of unfavourable locational factors which might deter secondary manufacturing industry from establishing in the area. One unfavourable locational characteristic is the distance of Atikokan from the major Canadian markets. In addition, while access to certain Northern United States cities is reasonable, it must also be borne in mind that there are tariff and non-tariff barriers which deter entry into the American market.

In terms of transportation facilities, the Town of Atikokan does not at this time have a commercial airport. A number of municipalities in the United States and Canada have developed a program which is designed to establish commercial airport facilities to be used as a mechanism for industrial development. The lack of a commercial airport may prove to be a deterrent to the establishment of certain secondary manufacturing facilities in Atikokan.

Due to the lack of an expanded and more developed economic base, there do not exist the necessary inter-industry linkages that are required for the establishment of a number of facilities. Thus, a secondary manufacturing industry established in Atikokan would have to import certain essential supplies of goods and equipment from Thunder Bay, Southern Ontario and elsewhere. This lack of availability of parts, components, raw materials and semi-finished products represents an additional operating cost for a secondary manufacturing facility in Atikokan.

Also, distance from markets may pose a problem for certain types of secondary manufacturing industries. There is a need for face-to-face discussions with suppliers which is not possible given the location of Atikokan. It should also be noted that this type of face-to-face communication may also be necessary with respect to customers for the products produced in Atikokan, and again the Atikokan location may make such discussions difficult.

Finally, it should be noted that Atikokan lies between Fort Frances and Thunder Bay. As such, both of these centres represent intervening opportunities for a manufacturer wishing to locate a facility in Northwestern Ontario. That is, one might wish to locate a facility in either Fort Frances or Thunder Bay given the access to markets that are available in both locations, and given the expanded industrial base that exists in both of those centres. With the possible exception of housing, Atikokan has no locational distinction with respect to either Fort Frances and/or Thunder Bay. While housing may be cheaper in Atikokan than it is in either of those centres mentioned, there exist difficulties in purchasing a house even though the costs of the houses are lower, due to an insufficient supply of houses.

FUNDING/INDUSTRIAL DEVELOPMENT INCENTIVES

Both the Department of Regional Economic Expansion (DREE) and the Northern Ontario Development Corporation (NODC) have programs for aiding establishment of secondary manufacturing industries, and other

industries, in such areas as Atikokan. The DREE funding is available as part of the capital costs involved in establishing the facility. NODC funding is available primarily in the form of loans for the establishment of facilities. These loans have very favourable terms and can be of substantial advantage to manufacturing industries. However, it should be noted that in both of these programs the development agencies are essentially in a responsive position. In few cases are they capable of taking an active policy position with respect to the identification and development of specific industrial opportunities in an area such as Atikokan.

It should also be noted that the programs available in the Atikokan area are equivalent to those programs available in Thunder Bay, Fort Frances and other areas in Ontario. Because the programs are the same, they do not provide Atikokan with any locational distinction with respect to the above-mentioned centres. Given the more favourable locational characteristics of both Fort Frances and Thunder Bay, the fact that the DREE and NODC programs are equivalent in all centres means that the locational disadvantage of Atikokan is maintained with respect to the other two centres.

At the present time, there is no one person(s) actively engaged, on a full-time basis, in promoting the economic development and growth of the Town of Atikokan. As discussed above, representatives of both the DREE and NODC have an industrial development responsibility which

extends over the entire area of Northwestern Ontario. Given these responsibilities it is not possible for the representatives of these agencies to be actively engaged in the industrial development of one specific location, such as Atikokan. Again, the fact that no one person is actively involved with the economic development of Atikokan, in addition to the comparative advantages that exist in both the areas of Fort Frances and Thunder Bay, leaves Atikokan in a position such that the attraction of secondary manufacturing industries becomes very difficult.

INDUSTRIAL DEVELOPMENT, IMPACT AND POTENTIAL

Despite certain locational disadvantages, Atikokan might attract certain footloose industries to establish facilities in the town. In this section, we will briefly discuss some of the secondary manufacturing industries which may be attracted to the Atikokan area and also discuss, in general terms, the impact of secondary manufacturing in the Atikokan area.

Potential Industries for Development

Appendix B, contains a brief analysis of a number of secondary manufacturing industries, such as textiles, mobile homes, certain sporting equipment, skis, etc. It must be stressed that these studies are not to be interpreted as feasibility studies. Rather, they are presented as an outline of industries that may be attracted to the Atikokan area, should detailed feasibility studies indicate their likely economic viability in the town.

The Impact of Industrial Development

A number of economic studies that discuss the economic impact of industrial development on a particular area, have been conducted in North America. However, it is difficult to perform this type of analysis for an area such as Atikokan. Atikokan has what is known as an "open" economy. This means that the establishment of an industrial facility in Atikokan, while creating a certain economic impact, will also have substantial leakages to other areas of the province and abroad. That is, such an establishment would likely purchase a significant proportion of its equipment and services from firms located outside of Atikokan.

Similarly, it is difficult to anticipate the size of a specific manufacturing establishment that might be attracted to the town. Depending upon the type of product produced, the economies of scale that apply to the product, and the markets for which the product is to be developed, the size of the facility can vary greatly. For example, in the sash, door, and other mill work industry (SIC 2541) while the median size of a firm is 0-4 employees there also exist a number of firms in the following size ranges:

Total Employed	Number of Establishments
0-4	397
5-14	225
15-49	160
50-99	39
100 and over	12

Therefore, it can be seen that facilities of different sizes may be

EXHIBIT 30

NET CHANGE PER INCREASE OF 100 MANUFACTURING EMPLOYEES

	Increase
Population	479
Households	113
School Enrollment	123
Retail Establishments	4
Retail Sales ($000)	356
Motor Vehicle Registrations	136
Employment in Manufacturing	100
Agriculture	13
Other Primary	-10
Construction	7
Transport and Communication	10
Trade, Finance and Insurance	23
Total Services	30
(Personal Services)	(10)
Other	-24
Total, All Industries:	149

SOURCE: "What Increased Manufacturing Employment Means to Community Growth", Canadian National Railways, Montreal, Quebec, undated.

established and the economic viability of each one of these plants will depend upon the specific type of product produced for its appropriate market.

Specific studies undertaken in Canada have attempted to determine the average economic impact of the establishment of particular types of industries in a given area. For the reasons discussed above, these economic impact estimates must be considered as only a broad approximation as to the impact that might occur in the Atikokan area.

In Exhibit 30, opposite, the results of a Canadian National Study are shown which indicate the impact of establishing a facility which will create 100 manufacturing jobs upon an average community. While Atikokan will not necessarily be an average community, as discussed in the Canadian National Study, the exhibit does indicate the general impact that may occur in Atikokan given the development of 100 secondary manufacturing jobs.

Studies have also been undertaken by the Department of Industry, Trade and Commerce in Ottawa with respect to such factors as the average salaries and wages associated with each job in the manufacturing sector and the number of jobs created by the various secondary manufacturing industries. Exhibit 31, overleaf, indicates (1) the range of salaries and wages per employee for 87 secondary manufacturing industry sectors, (2) the ranking of total employment created by each of these 87 industries, and (3) salaries and wages (ranked) for each of the 87 secondary manufacturing industries. These studies indicate the amount of employment,

EXHIBIT 31

STATISTICAL DATA ON SELECTED SECONDARY MANUFACTURING INDUSTRIES IN CANADA

Industry	SALARIES AND WAGES PER EMPLOYEE		Industry	TOTAL EMPLOYMENT		Industry	WAGES & SALARIES/SALES	
	$	Rank		Number	Rank		Percentage	Rank
Petroleum Refineries	9,372	1	Motor Vehicles & Parts	83,457	1	Engraving & Allied Industries	57.4	1
Breweries	8,442	2	Pulp & Paper Mills	75,427	2	Coffins and Caskets	40.4	2
Motor Vehicles & Parts	8,368	3	Other Machinery	65,590	3	Commercial Printing	38.0	3
Industrial Chemicals	8,368	4	Sawmills	51,575	4	Machine Shops	37.2	4
Pulp & Paper Mills	8,108	5	Communication Equipment	48,935	5	Publishing and Printing	36.6	5
Cement Mfrs.	8,049	6	Smelting & Refining	48,182	6	Foundation Garments	36.5	6
Soap & Cleaning Compounds	8,017	7	Iron & Steel Mills	45,100	7	Men's Clothing	34.8)	7
Aircraft & Parts	8,003	8	Men's Clothing	40,877	8	Women's Clothing	34.8)	8
Iron & Steel Mills	7,774	9	Other Manufacturing	39,809	9	Wooden Boxes	34.8)	9
Distilleries	7,721	10	Women's Clothing	38,881	10	Household Furniture	33.2	10
Boiler & Plate Works	7,688	11	Commercial Printing	38,723	11	Leather Products	32.9	11
Structural Steel	7,587	12	Bakery Products	36,456	12	Hardware and Tools	32.1)	12
Other Machinery	7,436	13	Meat Products	36,457	13	Other Clothing	32.1)	13
Smelting & Refining	7,353	14	Aircraft & Parts	34,174	14	Glass and Glass Products	31.7	14
Engraving & Allied Industries	7,352	15	Publishing & Printing	33,651	15	Broom, Brush and Mop	31.5	15
Agricultural Implements	7,165	16	Dairy Products	31,220	16	Office Furniture	31.2	16
Other Chemicals	7,132	17	Leather Products	31,191	17	Communication Equipment	30.9	17
Pharmaceuticals	7,123	18	Other Food Products	30,678	18	Other Manufacturing	30.8	18
Ready-Mix Concrete	7,064	19	Metal Stamping	30,463	19	Other Furniture	29.6	19
Other Non-Met. Mineral Products	6,992	20	Misc. Transportation	29,996	20	Aircraft and Parts	29.3	20
Wineries	6,966	21	Household Furniture	26,145	21	Ornamental Iron Works	28.8	21
Publishing & Printing	6,903	22	Industrial Elec. Equipment	25,425	22	Boiler and Plate Works	28.3	22
Industrial Elec. Equipment	6,846	23	Paper Boxes & Bags	23,452	23	Other Machinery	27.8)	23
Glass & Glass Products	6,844	24	Misc. Electrical Equip.	23,064	24	Industrial Elec. Equipment	27.8)	24
Wire & Wire Products	6,808	25	Rubber Products	22,827	25	Iron Foundries	27.7	25
Iron Foundries	6,761	26	Synthetic Textiles	21,749	26	Structural Steel	27.4	26
Commercial Printing	6,725	27	Cotton & Woollen Mills	21,701	27	Hosiery Mills	27.1	27
Paint & Varnish	6,715	28	Misc. Metal Products	20,895	28	Truck Bodies	26.9	28
Metal Stamping	6,696	29	Industrial Chemicals	20,736	29	Clay Products	26.5)	29
Rubber Products	6,683	30	Scientific & Prof. Equip.	20,310	30	Other Knitting Mills	26.5)	30
Commercial Refrigeration	6,671	31	Fruit & Vegetable Canners	19,348	31	Metal Stamping	26.2	31
Other Petroleum & Coal	6,656	32	Other Chemicals	19,346	32	Cotton & Woollen Mills	26.0	32
Tobacco Products	6,654	33	Fish Products	19,159	33	Bakery Products	25.9	33
Misc. Transportation	6,652	34	Structural Steel	18,204	34	Soft Drinks	25.6	34
Scientific & Prof. Equipment	6,641	35	Other Paper Products	17,314	35	Heating Equipment	25.5)	35
Fertilizers	6,630	36	Wire & Wire Products	17,014	36	Sporting Goods & Toys	25.5)	36
Machine Shops	6,592	37	Other Knitting Mills	16,516	37	Synthetic Textiles	25.5)	37
Hardware & Tools	6,535	38	Planing Mills	16,338	38	Other Non-Metallic Products	25.4	38
Communication Equipment	6,491	39	Other Textile Products	16,060	39	Iron and Steel Mills	25.2)	39
Heating Equipment	6,460	40	Other Primary Textiles	15,819	40	Miscellaneous Transportation	25.2)	40
Concrete Manufacturing	6,453	41	Soft Drinks	14,817	41	Jewellery and Silverware	24.5	41
Misc. Metal Products	6,379	42	Machine Shops	14,510	42	Scientific & Prof. Equipment	24.4	42
Major Appliances	6,342	43	Grain Mills	14,417	43	Sawmills	24.2	43
Publishing Only (x)	6,297 (x)	44	Hardware & Tools	14,404	44	Misc. Wood Products	24.1	44
Ornamental Iron Works	6,286	45	Veneer & Plywood	13,760	45	Rubber Products	23.8)	45
Other Paper Products	6,282	46	Other Furniture	13,081	46	Other Primary Textiles	23.8)	46
Paper Boxes & Bags	6,263	47	Ornamental Iron Works	12,784	47	Concrete Manufacturers	23.4	47
Meat Products	6,251	48	Pharmaceuticals	12,644	48	Other Textile Products	23.3)	48
Toilet Preparations	6,211	49	Agricultural Implements	12,063	49	Planing Mills	23.3)	49
Misc. Electrical Equipment	6,173	50	Glass & Glass Products	12,031	50	Smelting and Refining	23.2	50
Office Furniture	6,068	51	Major Appliances	11,971	51	Paint and Varnish	22.9	51
Battery Mfrs.	6,059	52	Iron Foundries	11,582	52	Veneer and Plywood	22.8	52
Grain Mills	6,043	53	Other Clothing	11,276	53	Misc. Metal Products	22.6	53
Veneer & Plywood	6,005	54	Other Non-Metallic Minerals	11,178	54	Other Paper Products	22.4	54
Sawmills	5,949	55	Truck Bodies	10,129	55	Pulp and Paper Mills	22.3	55
Soft Drinks	5,949	56	Tobacco Products	10,049	56	Wire and Wire Products	22.1	56
Dairy Products	5,941	57	Concrete Manufacturing	10,011	57	Small Appliances	21.9	57
Clay Products	5,923	58	Sporting Goods & Toys	9,274	58	Paper Boxes and Bags	21.8	58
Other Food Products	5,880	59	Breweries	9,255	59	Major Appliances	21.7	59
Small Appliances	5,797	60	Petroleum Refineries	9,226	60	Fur Goods	21.3	60
Synthetic Textiles	5,687	61	Hosiery Mills	8,166	61	Publishing Only	21.1	61
Other Furniture	5,635	62	Paint & Varnish	8,170	62	Other Chemicals	20.1	62
Planing Mills	5,632	63	Radio & T.V. Receivers	8,087	63	Batteries	19.7)	63
Truck Bodies	5,605	64	Ready-Mix Concrete	7,509	64	Pharmaceuticals	19.7)	64
Radio & T.V. Receivers	5,590	65	Boiler & Plate Works	7,494	65	Industrial Chemicals	19.1	65
Fur Goods	5,525	66	Engraving & Allied Industries	6,617	66	Ready-Mix Concrete	18.6	66
Other Manufacturing	5,513	67	Small Appliances	5,997	67	Misc. Electrical Equipment	18.3	67
Jewellery & Silverware	5,407	68	Distilleries	5,901	68	Agricultural Implements	18.1)	68
Other Primary Textiles	5,250	69	Soap & Cleaning Compounds	5,826	69	Commercial Refrigeration	18.1)	69
Other Textile Products	5,236	70	Jewellery & Silverware	5,725	70	Cement Manufacturers	17.7	70
Bakery Products	5,189	71	Publishing Only	5,665	71	Other Petroleum & Coal Products	17.6	71
Misc. Wood Products	5,143	72	Misc. Wood Products	5,491	72	Toilet Preparations	16.9	72
Cotton & Woollen Mills	5,009	73	Clay Products	5,383	73	Radio and T.V. Receivers	16.5)	73
Wooden Boxes	4,996	74	Foundation Garments	5,226	74	Fish Products	16.5)	74
Fruit & Veg. Canners	4,982	75	Toilet Preparations	5,222	75	Soap and Cleaning Compounds	15.9	75
Household Furniture	4,921	76	Heating Equipment	5,061	76	Fruit & Vegetable Canners	15.4	76
Coffis & Caskets	4,863	77	Office Furniture	5,022	77	Dairy Products	14.6	77
Broom, Brush & Mop	4,794	78	Cement Mfrs.	3,778	78	Other Food Products	14.3	78
Sporting Goods & Toys	4,786	79	Wooden Boxes	3,426	79	Wineries	12.4	79
Leather Products	4,409	80	Commercial Refrigeration	2,864	80	Fertilizers	12.2	80
Other Knitting Mills	4,263	81	Fur Goods	2,831	81	Motor Vehicles and Parts	11.5)	81
Hosiery Mills	4,207	82	Battery Mfrs.	2,716	82	Breweries	11.5)	82
Men's Clothing	4,176	83	Broom, Brush & Mop	2,341	83	Meat Products	9.9	83
Women's Clothing	4,137	84	Fertilizers	1,506	84	Grain Mills	8.9	84
Foundation Garments	4,066	85	Coffins & Caskets	1,300	85	Distilleries	8.6	85
Other Clothing	3,910	86	Wineries	892	86	Petroleum Refineries	8.5)	86
Fish Products	3,709	87	Other Petroleum & Coal	532	87	Tobacco Products	8.5)	87

SOURCE: "Statistical Handbook on Canadian Manufacturing Industries", Productivity Branch, Office of Economics, Department of Industry, Trade, and Commerce, Ottawa, 1972, Working Document.

in a general manner, that may be anticipated with the establishment of a facility in one of these industrial sectors, and the value of sales required to create one new job in these industries. For example, it can be seen from the data presented in Exhibit 31 that the pulp and paper industry (1) pays high wages per employee, and, (2) in total is a large employer. However, the percentage of wages and salaries per dollar of sales is much lower. This indicates that large sales volumes are required to create a new job in the pulp and paper industry. Thus, while the wage levels are high, the pulp and paper industry is not labour-intensive. The opposite is the case with the Engraving and Allied Industries. While wages are relatively high and while an additional dollar of sales creates more new jobs than in the pulp and paper industry, in total the Engraving and Allied Industries is not a large employer.

As the economic base of Atikokan expands, it is anticipated that the industrial development process will become more selective and that the area will be able to attract and develop those industries and industry sectors which appear to offer the highest and most desirable economic impact upon the area. However, the area will not reach this phase in the short to medium time frame. Therefore, it will be necessary for Atikokan to attempt to attract any secondary manufacturing industry which appears to be viable and capable of sustained development over time. Atikokan should be prepared to accept the development of all types of secondary manufacturing industries, both large and small, in an attempt to broaden and expand its industrial development base.

SECONDARY MANUFACTURING DEVELOPMENT POTENTIAL

At this time, the ability of the Town of Atikokan to attract footloose secondary manufacturing industries does not appear to be high. This is due to two major factors, (1) no programs exist that would permit Atikokan to gain a comparative advantage over intervening opportunities, such as Fort Frances and Thunder Bay, and (2) the absence of a full-time development agency aimed at developing the potential of the town.

It must be noted that the definition of footloose industries does not include industries related to the mining and/or forestry sectors. In the forestry sector, there is a detailed discussion as to the establishment of facilities based upon the wood resource in the area.

Assuming no change in the economic environment of Atikokan, we do see potential for the expansion of existing firms and for the establishment of new facilities by local entrepreneurs. Such expansion and establishment of new facilities may occur at any time in the future, but we do not foresee any major expansion of the existing facilities or establishment of new facilities. There exists a possibility for the expansion of both the canoe facility and the paddle facility, and the establishment of manufacturing industries based upon supplying equipment to the mining sector. These industrial development opportunities, while important generators of income and economic activity, do not appear to be of sufficient magnitude to create substantial levels of employment that will significantly offset the impact of Caland's closure. However,

in conjunction with other development opportunities that may take place in the Atikokan area, in the tourist, forestry, and mining sectors, these manufacturing developments will play an important role in the extension and expansion of the economic base.

RECOMMENDATIONS

Given the existing nature of Atikokan, we anticipate a small but continuing expansion of the secondary manufacturing industry base. Based upon our field trips and discussions with entrepreneurs, the employment generating prospects for these non-resource-based secondary manufacturing industries appear, at this time, to be small.

Nonetheless, the Atikokan area does have a number of locational advantages for selected secondary manufacturing industries. This locational potential will be developed over time. We recommend the establishment of an Atikokan Development Corporation to accelerate the establishment of viable secondary manufacturing industries in Atikokan. The proposed Atikokan Development Corporation will be able to take an initiating role (something that is not presently being done by any one person and/or agency) and will also be able to provide financial and consulting assistance such that the Atikokan area will have a comparative advantage in terms of attracting industry with respect to competing locations. Given the establishment of an Atikokan Development Corporation, we anticipate that the employment generating capability of the secondary manufacturing sector will be significantly enhanced. At this time, it

is not possible to estimate exactly how many manufacturing jobs may be created as a result of this Development Corporation; however, the number of jobs created would be substantially in excess of those that would be created under normal market circumstances. The establishment of such a corporation will assist in the broadening of the tourist and industrial economic base such that the stability of employment opportunities in Atikokan will be enhanced.

VI - PROPOSED ATIKOKAN DEVELOPMENT CORPORATION

We recommend the establishment of an Atikokan Development Corporation (ADC) to stimulate general economic activity in the area. The Corporation would be involved in the entire range of economic development activities such as industrial promotion, assistance to local entrepreneurs, expansion of the tourist industry, etc. In addition to these functions, the Corporation would attempt to attract other employment creating activities to the area.

For example, we have initiated preliminary contact with the Canadian Penitentiary Service to ascertain the criteria they use to evaluate possible locations for penal institutions. A senior official indicated that the following criteria are used:

- locate institutions near prisoners' homes
- locate near universities and service groups for supporting services.

The location of a facility of this type in Atikokan would create about 150 jobs.

Contact was made also, with the Ontario Hydro regional office in Thunder Bay, to discuss various aspects of a thermal generating station that is to be located in Northwestern Ontario. Construction of the facility will begin in 1974, with completion scheduled for 1982. The work force during the construction phase will peak at approximately 900,

and on completion of permanent work force of between 200 and 250 people will be required.

Eleven sites for the proposed facility are currently under consideration, including Nipigon, Marathon and Geraldton. Ontario Hydro has received requests from a number of towns to locate the facility in their areas, but no such request has been received from the Township of Atikokan.

In determining the location of the facility, Ontario Hydro will consider the following:

- local availability of significant volumes of water
- facilities required for heat dissipation
- proximity to the major load centre of Thunder Bay.

The proposed Development Corporation would identify and promote the location of these types of facilities in addition to the more conventional types of secondary manufacturing facilities.

There also exists the potential closure of the Steep Rock facility at Atikokan. At this time, it is not possible to predict the shutdown date. Officials of Steep Rock indicated that they anticipate continued production at Atikokan until the mid-1980's. However, their estimates are contingent upon world market prices for iron ore and costs of production.

If the Steep Rock facility were to close before 1980, there would exist a requirement for manpower assistance in the form of retraining and mobility grants. Note, however, that this scenario assumes no substantial economic developments to offset the closure of Steep Rock. Should manpower policies be required, they could be coordinated by the ADC. Such programs are discussed in greater detail in Appendix A.

ADC FUNDING

It may be possible to structure the Corporation such that it has both local and provincial government participation. The funding of the Corporation may be such that part of the financing may be made available from local sources with the remainder (and by far the largest contribution) provided by the provincial government. The Atikokan Development Corporation may be established as either a profit or a non-profit organization. If the Corporation is to be non-profit, then there must be some mechanism for the local participants to withdraw their funds from the Corporation and to earn a rate of return on their invested money that is at least equivalent to what could be obtained in financial markets.

We recommend that the province explore the possibility that the funding of the Corporation may be, in part, assisted by certain federal departments, such as the Department of Regional Economic Expansion. Based upon our discussion with officials in DREE, it is possible that funding may be made available for the establishment of this type of Corporation.

ROLE OF THE ATIKOKAN DEVELOPMENT CORPORATION

The principal role of the Atikokan Development Corporation would be to create an economic environment in the area such that Atikokan would have a comparative advantage in attracting footloose secondary manufacturing industries to the area, vis-a-vis other potential locations.

The Development Corporation should also be engaged in the tourism field. The assistance to be given to the tourist sector can be varied and substantial. In addition to the provision of equity and loan capital, the Corporation could also assist in the promotional campaigns of the local tourist/recreation businesses. Such assistance, for example, might provide aid to undertake promotional campaigns at the major sportsmen shows in Illinois, Minnesota and Wisconsin in order to indicate the tourist and recreational advantages of spending one's vacation in the Atikokan area.

The Development Corporation would be as concerned with the establishment and expansion of facilities by entrepreneurs already located in the community, as well as the attraction of businesses from outside of the area. Particularly, given Atikokan's locational nature and the dynamism of the local business community, it is important that the economic development potential of the local entrepreneurs be maximized to the greatest extent feasible.

The Atikokan Development Corporation would hire outside consultants and/or utilize the services of retired Canadian executives provided either through federal or provincial development agencies. The use of certain outside assistance would be very important to local firms which may be in the process of expanding and/or initiating a new facility. For example, the present manufacturers of canoes and paddles could, in our opinion, benefit from this type of management expertise. Many studies have indicated that while a lack of financial strength is the expressed factor that is normally discussed when a small business becomes non-viable, in the majority of the cases the real reason for the closing of the establishment has been a lack of sufficient management expertise. Thus, the manager of a facility may be highly competent in the production and personnel management of the organization but may lack expertise in the field of marketing and/or finance. On the other hand, certain manufacturers are themselves skilled tradesmen who have difficulty in establishing larger scale production facilities where it is necessary to manufacture a quality product in volume. It would be the function of the Development Corporation to assist the small businessmen in areas of weakness.

The Development Corporation would also have to act as an initiator for certain economic development-oriented community activities. For example, it would take the responsibility for initiating a general fixing-up and cleaning-up of the town and environment of Atikokan. In addition, the Development Corporation would also identify those infrastructure investments that may be required in order to develop the

tourism sector. It would then be the role of the Development Corporation to make these infrastructure requirements known to the provincial government and to ensure that the phasing and completion of these projects are properly conducted.

Initially, the Development Corporation could be structured with one full-time staff member and a secretary/administrative assistant. The full-time staff member would be the Executive Director of the Corporation and it is anticipated that his salary would be in the area of $30,000 plus. The executive chosen for this position would ideally come from industry and would be hired for a fixed term contract. If at all possible, the executive chosen for this position should either be currently employed in Northern Ontario or should have had substantial Northern Ontario experience. As the organization develops, it may be necessary for the Corporation to add additional staff. However, in the interim, the local members on the Board of the Corporation should be in a position to provide substantial assistance to the Executive Director. Moreover, the Executive Director would also be able to draw upon the services provided by the government organizations located in Northwestern Ontario.

The principal role of the Atikokan Development Corporation would be to act as an initiator. The Corporation could actively become involved in existing and potential local manufacturing and tourist operations. It could provide financial help of an equity or loan nature, where required, as well as consulting assistance to local companies

when requested to do so. It would assist local tourist operators to promote their operations and to upgrade their facilities in such a way as to maximize the potential revenues available from the tourist/recreation industry. The demands on the Executive Director hired for this position would be such that he would have to be of sufficient stature to be able to carry on discussions with presidents of major corporations both in Canada and abroad. The Executive Director would be responsible for contacting and conducting continuing liaison with footloose manufacturing industries in order to indicate the desirability of locating a facility in the Atikokan area. The Development Corporation would also be capable of providing sufficient funding such that the Atikokan area will have a comparative advantage over other competing areas.

The type of locational advantage that the Development Corporation could provide may be, for example, the construction of a plant facility, or providing capital for the purchase of machinery and equipment. That is, the Atikokan Development Corporation may construct a general purpose industrial development building and either sell it or lease it to a potential secondary manufacturing industry for a nominal amount. Whenever possible, the Development Corporation should avoid becoming involved in continuing subsidies to manufacturing industries. However, there may be cases where, for example, the value to weight ratio of the item to be produced in Atikokan is such that it is not capable of completely covering the transportation costs that would be involved in producing the product in Atikokan. We recommend that the

proposed Development Corporation should seriously consider the provision of a transportation subsidy, of a reasonable nature, such that these facilities may profitably establish in the Atikokan area. The Corporation would thus have the mandate to determine the specific requirements of a given secondary manufacturing industry and then conduct its own internal investigation to ascertain the cost-effectiveness of providing assistance to this manufacturing industry. The provision of a continuing subsidy may appear to be inefficient initially; however, if the establishment of a particular industry provides the required economic base to attract other industries and to give stability to the Atikokan work force, then the Atikokan Development Corporation should have in its mandate the ability to provide a subsidy of a continuing nature to selected manufacturing industries.

VII - TRANSPORTATION REQUIREMENTS OF ATIKOKAN

Given its location in Northwestern Ontario the Town of Atikokan has certain unique requirements with respect to transportation, which necessitate an assessment of both economic and social considerations.

From an economic standpoint, construction of a road creates certain benefits, while incurring capital and operating costs. It is possible to quantify these benefits and costs such that an internal rate of return can be calculated, and this internal rate of return can then be compared to a government social discount rate to determine whether the proposed project has merit or whether the funds would be better expended in other areas.

In a social context, all citizens of Northern Ontario, as residents of the Province of Ontario, are entitled to a certain level of public service. Given the great distances to be spanned in living in Northern Ontario and the sparcity of population, it may, at times, be difficult to justify on an economic cost/benefit calculation the provision of certain social infrastructure services. Nevertheless, the social requirements of the people in Northern Ontario must be taken into consideration and must be considered as a factor in determining whether or not certain infrastructure facility will be provided.

A MUNICIPAL AIRPORT

In the economic literature there exists a number of studies which indicate the impact of an airport on the economic development of specific communities. Although the literature is unclear at the moment as to the exact impact of providing regular service for a community, a number of states in the United States have airport for development programs. Under this hypothesis it is suggested that a small community cannot attract footlose secondary manufacturing industries unless there exists in the community access such that executives of the attracted companies can travel to major urban centres in as expeditious a manner as possible. For this reason, states such as Ohio have instituted significant airport development programs for many smaller communities.

An announcement in the local Atikokan paper on November 15, 1973, stated that the Federal Ministry of Transportation is prepared to support Atikokan's request for a commercial airport. However, it is unclear at this time what priority that will be given to Atikokan vis-a-vis the other communities that have also been recommended to receive funding for the building of a commercial airport. We recommend that the province consider assisting Atikokan in the building of the proposed airport such that regular commuter service can be provided.

The building of such an airport will create a certain number of jobs as will the requirement to man the airport and to provide maintenance services. In addition, the availability of the airport will act as a favourable locational characteristic for manufacturers interested in establishing a facility in the Atikokan area.

The cost of construction will depend upon whether a new airport is built or one of the two existing airports is upgraded. Upgrading of one of the existing airports could cost $200,000 plus. Construction of a new, paved, 3,000-4,000 by 150 feet runway could cost from $250,000 to $1 million depending upon such factors as drainage, grading requirements and access roads. Construction of a new airport with the characteristics of the facility at Dryden (5,400 by 150 feet of paved runway) could cost $1.5 million.

ROAD FROM ATIKOKAN TO IGNACE

The Ontario Ministry of Transportation and Communications has conducted an economic cost/benefit study on the feasibility of constructing a secondary assess road from the Town of Atikokan to Ignace. We have reviewed the study undertaken by the MTC and we have found it to be methodologically correct. The results obtained from the study are internally consistant given the assumptions used and the methodology tends to conform to that generally used in the economic literature.

The MTC report states, however, that no attempt was made to quantify the economic development benefit associated with increased levels of tourism. This was due to the uncertainty regarding the development of the White Otter Lake area and the establishment of northern entry points into Quetico Park, as well as the lack of economic profit generated. Nonetheless, the report notes that "historical evidence indicates that where a highway accesses prime recreation land, outfitters and lodge operators congregate in considerable numbers...."

As discussed in the earlier section on Tourism, the beneficial impact of the construction of a road from Atikokan to Ignace through the White Otter area will not be realized until there are certain fundamental changes to the tourism sector in the Atikokan area. That is, there must be some reason for tourists to wish to stop in Atikokan. The development of the tourist potential of the White Otter area would have a minimum economic impact on Atikokan as the town is presently structured. However, if the recommendations of this study are implemented, then we feel that the economic impact of the road from Atikokan to Ignace might be substantial with respect to the increased tourism volume that is generated and the resulting employment and income created in the Atikokan area.

With respect to the proposed Atikokan-to-Ignace highway, we have conducted discussions with those private-sector companies currently engaged in mineral and forestry activity in the Atikokan and Northwestern Ontario areas. Based upon our discussions with these senior corporate officials, it does not appear that a road link from Atikokan to Ignace would act as a major stimulant to either forestry or mineral exploration activity.

Given the social requirements of Northwestern Ontario and the long distances involved in maintaining social contact, the provision of adequate road service becomes a fundamental factor in the social welfare of these residents of the Province of Ontario. For this reason, the social

impact of the provision of the road from Atikokan to Ignace must not be dismissed lightly, even though it is not feasible to translate these benefits into economic terms. The social justification for the road, therefore, becomes a political decision that is made based upon both the social needs of Atikokan and the government's long-term plans in respect to the overall development of Northwestern Ontario.

It should be noted that the social benefits of providing access to the White Otter area for all residents of Ontario does not appear to have been evaluated in the MTC report. However, as discussed in the section on Tourism, if not properly planned, the construction of a road from Atikokan to Ignace may provide unauthorized access to campers; this situation may result in a greater refuse, and control problem than presently exists, and could harm existing tourist operations.

APPENDIX A

MANPOWER MOBILITY AND RETRAINING PROGRAMS

MANPOWER MOBILITY AND RETRAINING PROGRAMS

Senior officials of Steep Rock Iron Mines Ltd. indicated that the company's operation at Atikokan is anticipated to continue in production into the mid-1980's. However, this estimate is contingent upon a market price for iron ore and costs of production such that the facility at Atikokan would remain profitable. If Steep Rock discontinued production in Atikokan in the period 1978-1982, the impact upon the Atikokan area could be severe.

A program of social mobility and retraining may be required in order to mitigate the impact of the Steep Rock closure. The following sections outlines the types of programs that are currently available.

PRESENT MANPOWER AND RETRAINING PROGRAMS

The governments of a number of western countries operate manpower mobility and training programs in an effort to combat the problem of structural unemployment. Structural unemployment occurs where substantial job opportunities exist simultaneously with high unemployment. Government efforts aimed at reducing this problem include provision of retraining programs, financial assistance for those under training and, where job opportunities are located far distant from the main pools of unemployed, programs to help people move.

PROGRAMS OF OTHER COUNTRIES

In most countries where government aid is provided, retraining assistance takes two forms:

- institutional training courses which take place mainly in classroom-type settings
- in-industry or on-the-job training carried out at the place of employment.

Institutional-type training programs are usually designed to provide a broad range of knowledge or capability to equip the worker to enter a new trade or field of industry. In-industry programs are more specific in nature, training the worker in a new skill for a particular type of job.

Sweden has one of the largest programs relative to the size of its labour force, in accordance with its policy to move people to areas of employment opportunity as opposed to moving industry to areas of high unemployment. Their program provides a system of generous relocation allowances to workers who move with their families and settle into a new area. The main intention of the British 1964 Industry Training Act was to allocate industrial training funds in a general way across all industries, providing 28 Training Boards on a country-wide basis to ensure effective use of funds. The Ministry of Labour operates relocation schemes to encourage mobility, but which are relatively ineffective in relation to the size of the labour force.

France operates a small relocation assistance program financed by its National Employment Fund in an effort to help redundant workers from declining shipbuilding, textile, and mining industries. West Germany provides substantial assistance with travel, removal and settling in expenses through its federal office for Placement and Unemployment Insurance and individual land labour offices. Denmark operates a similar program. Norway provides relocation allowances for workers moving away from declining natural resource, fishing, and farming areas to urban centres. Holland assists married workers to move to new developing centres of industry in accordance with its policy of discouraging continuing growth in the Randstad industrialized areas.

In the U.S.A., the emphasis is on on-the-job retraining programs which account for about 80% of all manpower training expenditure. There are no general labour mobility programs although some recent demonstration projects may indicate some new effort in this direction.

CANADIAN PROGRAMS

The Canadian Federal Government operates a variety of Canada Manpower programs for retraining and worker mobility. These provide the main effort to combat the structural unemployment problem with provincial governments providing certain specific inputs. For instance, in Ontario some assistance with relocation may be obtained under the Welfare Act and the Department of Education operates training-in-industry programs with a budget of around $2 million to encourage upgrading of skills and work status.

Canada Manpower Training Program

This program covers a wide range of activities to assist workers to overcome employment barriers created by lack of skills or knowledge, including:

- skill courses to equip workers for a new trade or occupation
- basic training for skill development (BTSD) courses which provide adults with the educational background needed to enter an occupational skill course
- language training for New Canadians in French or English
- apprentice training covering the classroom portion of provincial apprenticeship programs
- training-in-industry programs to encourage industry to develop improved training schemes, with priority given to those which reduce unemployment, prevent layoffs, or provide skills which are in short supply
- management training courses for managerial and supervisory personnel operated through provincial departments of education
- uniform inter-provincial standards of competency (Red Seals) to facilitate journeymen mobility between provinces.

Until recently, Canada Manpower training courses were open only to those who had been in the labour force for at least three years. To be eligible now, a trainee must have been out of school for one year (or to be one year older than the official school leaving age) and to be in good

health. Depending on the individual situation, financial assistance is provided to each trainee for travel and accommodation and a basic subsistence allowance provided for himself and certain dependents.

Training-in-industry programs provide assistance to the individual company of up to 75% of direct training costs and 25% to 50% of employee wages. The program can also provide up to 50% of a trainee's travel and living expenses if brought in from a remote location and up to 50% of the cost of sending employees to outside training courses. Training programs are organized by Canada Manpower offices which may coordinate their activities with adult training institutions, provincial establishments, and industrial training centres. Canada Manpower counsellors determine the suitability of an individual applicant and his eligibility for financial assistance.

Canada Manpower Mobility Program

This program is designed to provide financial assistance to enable workers to relocate in the area closest to their homes where suitable job opportunities exist, in cases where they are:

- unemployed
- under-employed, i.e. working less than 30 hours per week
- about to become unemployed following written notice of termination.

Financial assistance in the form of grants is available as follows:

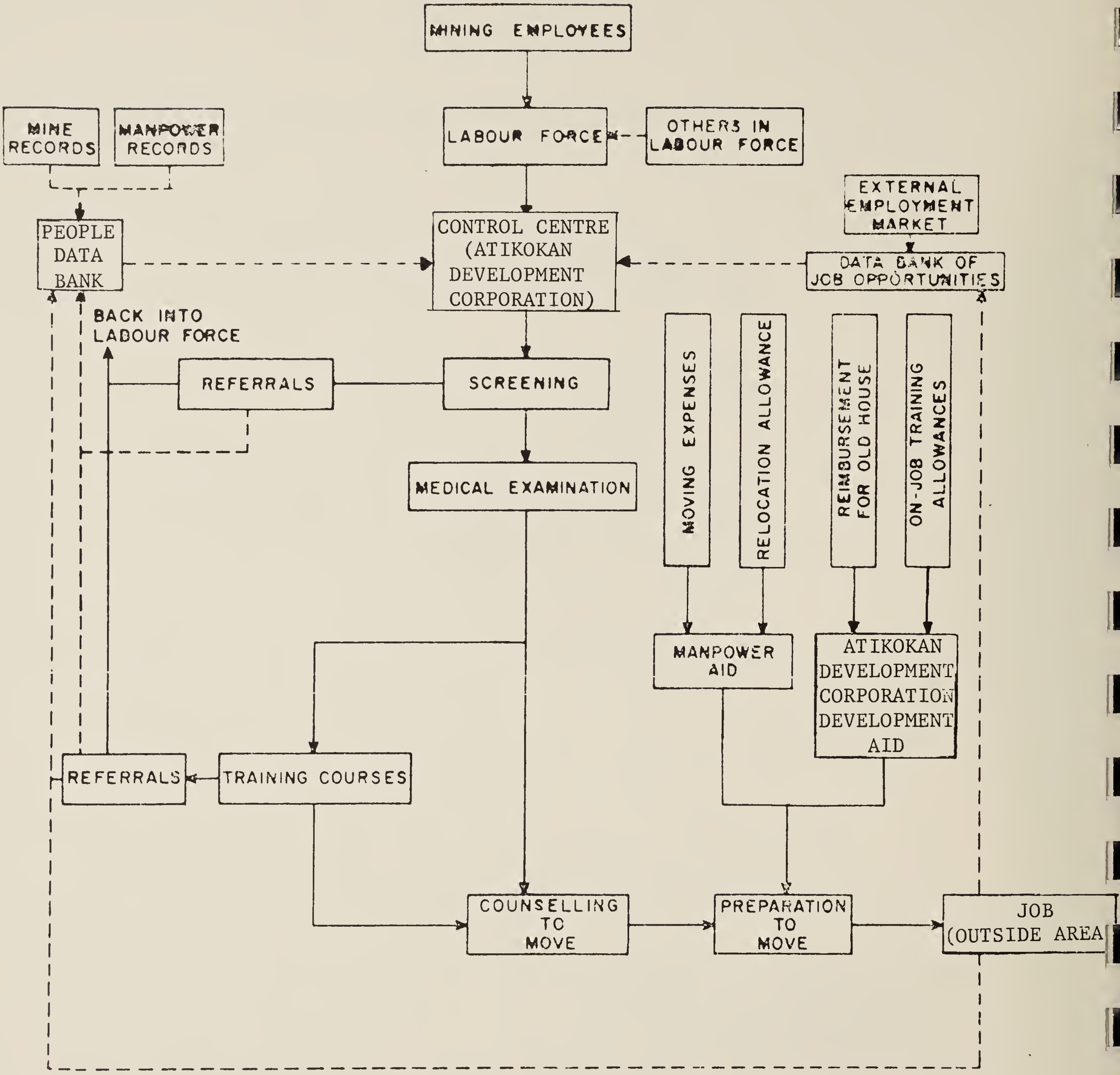
- trainee grants for travel to cover the cost of travel and subsistence when sent on courses away from home and in certain instances to cover commuting costs
- exploratory grants: to cover living and subsistence while looking for employment in a location away from home
- relocation grants: covers transportation for the worker and family, cost of shipping household effects, and provides a re-establishment allowance of up to $1,000 and allowance of up to $1,500 where the sale and purchase of a new home is involved.

All details of this program are handled by Canada Manpower offices where the individual workers may apply. Alternatively, group schemes are possible where a major plant move or closure is concerned, on a cost-sharing basis. Either grants or loans may be made available to cover the cost of relocating employees at the new plant site or at a new location producing similar products not owned by the same firm.

A MANPOWER AND RETRAINING PROGRAM ADMINISTERED BY THE ATIKOKAN DEVELOPMENT CORPORATION

Federal and Provincial mobility and retraining programs will evolve during the next few years and, presumably, the scope of these programs will broaden. Therefore, it is not realistic to recommend changes in existing programs at this time. We recommend that the Atikokan Development Corporation assume principal responsibility for the

EXHIBIT 32



SOCIAL MOBILITY PROGRAM
FLOW CHART

KATES, PEAT, MARWICK & CO.

administration of a mobility and retraining program which is designed to best meet the requirements of the work force at the time of the mine closure. Involvement of the Development Corporation would ensure local participation in the decision-making process.

Exhibit 32, opposite, illustrates the structure of a social mobility program. This program would be administered by the Development Corporation, in conjunction with Federal and Provincial agencies and departments. The purpose of this program would be assist redundant miners in securing adequate employment in other locations.

The Corporation would:

- interview the candidate and determine the type of assistance required
- provide educational assistance (such as retraining) if required
- counsel the candidate to assist in the transition and to secure the best employment opportunity
- provide financial aid
    - transportation costs covering travel for a job interview
    - relocation grant to cover the costs of moving household effects
    - travel costs for approved trainees taking occupational and trade training
    - purchase of property of workers forced to sell their homes at distress prices
- provide a subsidy to the employer of the mobility candidate to cover the costs of on-the-job training courses. Note, this subsidy would be made available to employers outside the Atikokan area
- develop a job opportunity data bank to correlate with the skills of the mobility candidates.

APPENDIX B

SYNOPSES OF SELECTED MANUFACTURING INDUSTRIES

Kates, Peat, Marwick & Co.

TENNIS EQUIPMENT AND OTHER RACKETS

INTRODUCTION

This report synopsis is restricted to three major racket sports, namely tennis, badminton and squash. The products covered in the study include:

- tennis rackets
  - metal
  - wood
- tennis balls
- badminton rackets
- squash rackets.

Tennis rackets are now available with wood, aluminum and steel frames, strung with either gut or nylon. Ash is the most common wood for racket frames, although some beech and maple is used. Mahogany is used as a veneer for decorative purposes.

MARKET SIZE AND GROWTH

There is minimal production of equipment for racket sports in Canada, and the following import figures therefore represent the magnitude of the Canadian market.

CANADIAN IMPORTS RACKET SPORTS ($ thousands)

YEAR	RACKETS	BALLS	TOTAL
1962	378.1	136.1	514.2
1965	475.4	271.3	746.7
1968	940.0	188.0	1128.0
1971	2207.0	353.0	2560.0
1972	2791.0	638.0	3429.0

Rackets

Shipments of rackets into Canada rose rapidly from $378,100 in 1962 to $2.79 million in 1972. Tennis rackets accounted for an extimated 80 per cent of all these imports, and although steel tennis racket frames have become more popular in recent years, especially in high priced rackets, wood frames still dominate the tennis market, accounting for over 90 per cent of the dollar value of tennis rackets sold.

Balls

Most balls are imported from the U.K. In 1972, balls valued at $446,000 were imported from the U.K. out of total imports of $638,000. The total volume of imported balls was 225,485 dozen.

Market Trends

Although steel and aluminum framed rackets gained rapid initial acceptance, their major asset, light weight, is also proving to be their downfall. The light weight lessens player control of the

racket head with a resulting loss of performance. Thus there is already a strong movement back to the basic wood racket.

Expenditures on racket sports in Canada are expected to increase at an average growth rate of 12.15 per cent for the next several years, and thus the Canadian market could reach $7.0 million by 1980.

MANUFACTURING

There is little manufacturing of racket sports equipment in Canada. Dunlop undertakes finishing operations on rackets at its Scarborough plant, while a small one-man operation produces badminton rackets for A.G. Spalding in Brantford.

Labour Costs

Indications are that the production of rackets is labour intensive and that this is the most significant production cost. The required skill levels are not too high, as is evidenced by the fact that a badminton racket retailing at $30 and produced for Spalding is manufactured in a garage operation by one man.

Raw Material Costs

Canadian woods are unsuitable for use in rackets. Historically, when rackets were produces in Canada, the ash was imported from Scandinavia.

It is reported that the production of metal frames requires a relatively large capital investment, as well as high technological skill levels, and it is unlikely that the limited Canadian market could support such investment.

Transportation

The high price of both rackets and balls together with their low weight and compactness results in transportation costs being a minor cost item.

Locational Characteristics

The availability and cost of labour with the requisite woodworking skills appear to be the prime criteria that would be applied by any company considering the manufacture of tennis equipment and other rackets in Canada. While there are obvious advantages in being located close to the major markets of Ontario and Quebec, and to potential sources of raw materials, these could well be more than offset by reduced labour costs.

THE CANADIAN SKI INDUSTRY

INTRODUCTION

There are two chief types of skis: water and snow. Snow skis can be divided further into downhill, jumping and cross-country.

Skis were formerly fashioned from one piece of wood. Later, plastic running surfaces were introduced to increase speed and durability, and metal skis with a wood or plastic core became increasingly popular. Since 1958, fibreglass has become predominant in ski production. The multiplicity of materials and complexity of construction create many technological problems, thereby making production difficult.

There are many brands, models and sizes of skis on the market. The tabulation which follows was compiled by the Skiing International Yearbook and illustrates the division of the market by ski price and type.

NUMBER OF BRANDS OF SKIS BY PRICE RANGE

TYPE	$0-50	$50-100	$100 and up
Wood	69	27	3
Metal	0	22	28
Fibreglass	0	24	81
Total	69	73	112

During the last few years, there has been a general trend toward purchasing more expensive skis, hence the increasing use of fibreglass.

MARKET SIZE AND GROWTH

The following table illustrates the considerable growth in the Canadian ski market that occured over the period 1966 to 1970.

GROWTH RATES OF SKI CONSUMPTION

YEAR	IMPORTS (Pairs)	DOMESTIC PRODUCTION (Pairs)	TOTAL CONSUMPTION (Pairs)	VALUE ($'000's)
1966	204,684	25,361	230,045	2,710
1967	237,635	27,573	265,208	4,008
1968	271,325	33,989	271,325	4,790
1969	340,472	40,783	381,255	5,864
1970	316,277	30,336	346,613	6,013
1972	454,218	N/A	N/A	N/A

Imports

Ski imports served both the low-priced and high-priced market. High-quality skis were supplied from Austria, France, Italy, Germany and U.S., and low-quality skis mainly from Japan and Eastern Europe. In terms of value, Austria shipped 34 per cent of total imports, and in terms of quantity, Japan was the most active trader. In terms of

both quantity and value imports in 1970 represented 90 per cent of total Canadian consumption.

Canadian Production

It should be noted that the Statistics Canada classification combines snow and water ski data, and further precise breakdown is difficult. According to industry sources, domestic snow ski production amounted only to a few thousand pairs and no more than $200,000 in value of factory shipments in 1970. In addition there were approximately 20,000 pairs of water skis manufactured in Canada, valued at approximately $400,000, and about 30,000 pairs were imported.

Future Trends

According to industry estimates, past trends of growth in consumption will continue in terms of quantity, but they are likely to decline in terms of value due to overcapacity in the world ski industry and the high level of inventories. However, it is difficult to quantify such changes.

Cross-Country Skis

During the past five years, cross-country skiing became very popular, and Canadian consumption of this type of ski reached $280,000 in 1971, up from $22,000 in 1967. Imports now represent 88 per cent of this total, the remainder being produced in Quebec. Statistics Canada has no breakdown of data according to ski category but industry estimates of Canadian production are in the range of three to five thousand pairs a year.

MANUFACTURING

There are two types of ski manufacturers in Canada, foreign subsidiary and domestic producer. The first one is a service centre, which has a small assembly operation of high-quality skis. The second one is a manufacturer of wooden goods producing low price skis in addition to a main line of products. Often, both types of enterprise are combined with wholesaling operations.

The ski manufacturing industry in Canada consists of seven establishments, and employs approximately 50 people. Individual manufacturers' shipments are usually in the range of from one to three thousand pairs, and each producer employs from five to ten people. During the last five years, this output and labout force has not changed significantly. In future, no major developments are expected, although two new manufacturers are considering ski production.

Five of the total seven establishments are located in Quebec, and three of these manufacture low to medium quality snow skis and cross-crountry skis. One manufacturer is located in Alberta manufacturing high quality snow skis, and another is located in British Columbia manufacturing water skis.

Manufacturing Costs

Manufacturing costs vary significantly depending upon the type and quality of ski manufactured. In the manufacture of downhill snow skis, direct material and direct labour costs, as a proportion of sales, are

estimated at 30 per cent and between 20 and 30 per cent respectively. Gross margins are estimated at between 40 and 50 per cent. In the manufacture of cross-crountry skis direct material and direct labour costs, as a percentage of sales, are estimated at 22 per cent and 16 per cent respectively. The manufacturers gross margin for this type of ski is estimated at 60 per cent.

Capital Costs

Capital costs vary mainly according to size of operation and type of ski produced. Estimates of these costs for cross-country and downhill, high-quality skis are presented below.

Cross-country and lower quality ski manufacturing operations, with a productive capacity of 75,000 pairs annually and employment for 50 people, would require the following approximate capitalization:

Building	$100,000
Equipment	300,000
Working Capital	150,000
	$550,000

For downhill skis, high-quality ski production, facilities with a production capacity of 10,000 pairs a year and employment of 50 people, capital costs would be approximately as follows:

Building	$150,000
Equipment	300,000
Working Capital	350,000
	$800,000

Due to the complexity of the manufacturing processes of this type of ski, the potential investor is faced with additional costs of product development or with purchase of technology costs.

Locational Characteristics

The location of present production facilities is the product of economic and personal considerations. Some manufacturers established their ski production facilities in the place in which they lived, mainly in Quebec, while others chose this Province because it offered the largest market. Approximately 53 per cent of total ski market is located in Quebec and 23 per cent in Ontario.

Transportation was considered as a rather insignificant locational factor with respect to finished products, as well as availability of raw materials. Most of the raw materials have to be imported from Europe or the United States.

GOLF CLUBS AND BALLS

INTRODUCTION

Golf Balls

Golf balls usually consist of three basic parts:

- centre core (rubber, steel, silicone and rubber, liquid, etc.)
- rubber winding (natural rubber tape and/or thread in tension wound around the core)
- cover (normally, natural or synthetic balata or proprietory products such as Surlyn).

Solid hard rubber balls are also now available on the market, chiefly in the low-priced end of the market, suitable for use on driving ranges.

Golf Clubs

The shafts of clubs are generally made of steel. A few years ago there was a movement toward aluminum shafts, but today they are almost non-existent. Grips are generally made of a rubber and cork composition although some leather grips are also manufactured. The heads of the golf clubs are either laminated maple for the woods, or dropped forged heads for irons.

In addition, a number of stainless steel heads are appearing on the market utilizing an investment casting process, while some of the cheaper woods use a plastic insert in the strike portion of the head.

MARKET SIZE AND GROWTH

Golf Balls

Total consumption of golf balls in Canada in 1971 was estimated at 900,000 dozens, valued at about $3.5 million. This represented an 80 per cent increase in consumption since 1964.

While little precise published data is available on the production of golf balls in Canada, it is estimated that domestic production amounted to 500,000 dozen balls a year, valued at close to $2.0 million. Most of the balls made in Canada fall into the medium quality range.

There has been a sharp increase in the importation of golf balls, increasing from 195,000 dozen in 1964 to 491,315 dozen in 1972. It is claimed that imported balls account for almost two-thirds of the top line, high compression balls sold in Canada, and a major proportion of the low line balls.

Golf Clubs

Approximately $8 million worth (at the manufacturers level) of golf clubs were sold in Canada in 1971, up from $4.75 million in 1965. Canadian production accounted for an estimated $7.5 million worth of this total, and the growth in Canadian production is illustrated by the following data:

	$ millions
1955	1.4
1960	2.6
1965	4.5
1971	7.5

The manufacture of golf clubs in Canada is essentially an assembly and finishing process in that the component parts, mainly the heads, grips and shafts, are bought as basic components parts and finished and assembled.

Import figures for golf equipment combine complete golf clubs and finished parts. The value of these components and finished clubs has risen steadily over the past several years as can be shown from the following figures.

	$ million
1965	0.75
1968	1.18
1971	1.65

Market Trends

Future growth in sales of golf equipment is obviously related to the number of active golfers and the availability of adequate facilities for them to play the sport. Between 1967 and 1969, the number of active golfers was estimated at between 600,000 and 800,000, while the number of private and fee-paying courses rose from 200 in 1961 to 774 in 1968.

Golf associations report that recently there have been insufficient new courses opened to keep pace with the potential growth in the number of players. It is feared that this lack of facilities could result in a dissatisfaction among potential players and restrict what could otherwise be a healthy growth market.

MANUFACTURING

Golf Balls

There are two major producers of golf balls in Canada, namely Campbell Manufacturing in Willowdale, Ontario, and Spalding in Brantford, Ontario. In addition there are a number of small companies across the country either manufacturing balls or merely re-covering them. These are usually only one-man operations.

The manufacture of gold balls is capital intensive, requiring winding machines, molding machines, as well as all the required finishing equipment such as spray painting. The golf ball industry is characterized by rapidly changing technology and high marketing and commercial costs.

Golf Clubs

The major producers of golf clubs in Canada include Campbell's, Wilson's, Spalding, Slazenger and Brunswick. All firms import their various components, namely shafts and blanks for irons, and grips, primarily from the U.S. Campbell's make their own heads for woods but the other manufacturers imported most, if not all, of their wood heads from the U.S. until quite recently. We understand that there is a Canadian manufacturer of heads for woods in Tweed, Ontario and most of the Canadian manufacturers are considering this source of supply, although production is somewhat limited.

Since golf club manufacturing comprises essentially assembly and finishing operations, little expensive equipment is required. It is

estimated that manufacturing costs for clubs breakdown approximately as follows:

Raw Materials	40-45%
Labour	30-35%
Selling and Administrative Expenses	20-25%

Locational Characteristics

The major parameter in the choice of a location for a manufacturing facility for golf equipment must be the availability of a supply of suitably skilled labour. This is particularly important in golf club production, where there is still a significant amount of hand work. Golf ball production on the other hand requires operators for winding machines and moulding equipment.

OUTLINES OF OTHER SELECTED SECONDARY MANUFACTURING INDUSTRIES

THE GARMENT INDUSTRY

The garment industry is highly labour-intensive and is characterized by its uniformity of production processes. In general, there are about twenty production stages using more or less the same machinery across the industry, but producing a very wide variety of garment/fabric combinations. Although the marketing function is highly dependent on its proximity to the large centres of population, the marketing/production cycle is such that the plant can be a considerable distance removed. Textile raw materials may be transported over long distances and many are imported.

Production requires a considerable investment in manpower training, which ranges from three months for relatively unskilled work to twelve months for the more skilled jobs. A rough cross-section of the labour force is given in the following table:

Type of Labour	% of Labour Force
Professional and Managerial	1
Skilled	11-25
Semi-skilled	42-72
Unskilled and Clerical	13-33
Women	75-80

Factories near the centres of population have experienced very high turnover in recent years, and there is a trend to move plants to remote areas where a more stable pool of labour can be relied on.

Requirements for plant space are flexible and power is needed for running the light machinery involved and in heating, lighting, etc. The production process does not normally produce polluting effluents. Access to fast transportation routes is required.

MOBILE HOMES

Production is in general an assembly type operation, the end product being a fully-equipped, prefabricated home which can be transported by highway. Although there is a trend to more mass production of components, the main products brought in from outside to most Canadian plants include only appliances, axle assemblies and electrical components.

Costs of transportation of the final product can become a significant consideration in determining the size of the market (about 50¢ per mile) and ideally the plant is situated close to the market. The market may include areas of low income population, mining towns, construction camps or retirement centres.

Close proximity to lumber sources is desireable and labour is mainly unskilled. Production requires a large, shell-type building and plenty of outside storage space. Electrical power and water needs

are minimal. Location close to rail transport is only required where production may exceed 2,000 units a year which makes rail transport competitive with highway.

The composition of the labour force is typically as shown in the following table:

Production Volume - Units Per Year	300	1,000	3,000
Total Number of Employees	100	150	200-250
% of Employees			
- Professional and Managerial	5	5	10
- Skilled	5	5	10
- Unskilled and Clerical	90	90	80
- Women	5	5	5

HOUSEHOLD FURNITURE

This area includes both hard and soft furnishings, cabinets and garden furniture. Although the larger firms have achieved production volumes and economies of scale that enable them to compete in almost every area of the country, it is possible for a small production unit to be competitive in its own local area if reasonably remote from the major centres of population.

Location close to a source of lumber is desirable although other needs such as metals, rubber, plastics, leather may be transported

from reasonably remote sources. Good highway access is essential for truck transport to market.

Up to one-third of the labour force may be female as shown in the following table:

Total Number of Employees	15-20	35-40	75-80
% of employees			
- Professional and Managerial	10	10	10
- Skilled	30	30	40
- Semi-skilled	40	40	40
- Unskilled and Clerical	20	20	10
- Women	33	33	33

Single floor plant accommodation is required with space for storage and possibly a showroom. Electric power and water needs are minimal and there is no polluting effluent.

MILLWORK

Traditionally, millwork involves the manufacture of sashes, doors, window and door frames, construction moulding and roof trusses. Due to a high degree of industrialization in building, the small millwork plant is now only viable in remote areas where it can serve a small local market. If there are no similar operations in the area, the plant may have a significant import substitution role. The constitution of the labour force is shown in the following table:

Total Number of Employees	15-20	35-40	75-80
% of employees			
- Professional and Managerial	15	10	10
- Skilled	15	20	20
- Semi-skilled	60	60	60
- Unskilled and Clerical	10	10	10
- Women	-	5	5

Considerable on-the-job training is required to bring new labour up to the standard needed to produce quality products.

Building requirements are relatively simple and probably a pre-built factory or other existing building may be suitable. Outward transportation is normally by truck.

PREFABRICATED HOUSING

Prefabricated housing manufacture is only feasible when there is a sufficient market potential within the radius of between 200 and 350 miles. Costs of transportation normally precludes market expansion beyond this distance.

Existing prefabricated housing systems are geared for lower price housing for land developers and large scale building projects.

The labour force is constituted as follows:

Total Number of Employees	60	120
% of employees		
- Professional and Managerial	10	10
- Skilled	20	20
- Semi-skilled	60	60
- Unskilled and Clerical	10	10
- Women	5	5

Few skills are needed to operate the highly automated machinery which is normally leased.

Access to major material sources is needed, particularly lumber.

Open space buildings with adequate headroom are needed and utility requirements are minimal. Transportation is usually by special truck.

TUFTED CARPETS

There are a number of separable production stages in the manufacture of tufted carpets which makes possible a wide variety of options for each particular plant. The plant may buy special feed yarn, plain or uncoloured, or spin its own from either coloured or

uncoloured stock. The processes of tufting, latex backing and colouring are normally done in the same plant.

The production plant may be operated successfully remote from the market, by skillfully planning high inventories of up to one-third of annual production. There may be considerable water consumption and pollution is a problem, although the substitution of alcohol may reduce this in the future.

Production is relatively labour-intensive and typically constituted as follows:

Total Number of Employees	25-155	195-290	390-570
Number engaged in:			
- Spinning	35-45	70-90	140-180
- Tufting	20-30	40-50	80-90
- Finishing	10-30	25-50	50-100
- Other	30-50	60-100	120-200
% of employees			
- Professional and Managerial	5-10	5-10	5-10
- Skilled	5-15	5-15	5-15
- Unskilled and Clerical	75-90	75-90	75-90

A high proportion of female labour is possible.

The production space requirements vary considerably with the stages of production to be included. Natural gas may be required for

water heating and other electrical power requirements are nominal.

Transportation outward may be by truck or rail.

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